# THE BUILDER

## A Journal for the Architect & Constructor

MARCH 1, 1929 No. 4491

## LEADING CONTENTS


ARTICLES PAGES

Leader : Plumbing and the Architect ... 409
Notes ... 410 & 411
General News ... 412
Competition News ... 412
Correspondence ... 413
Architectural Association : Architectural Etchings ... 414
Historic Organs and Pianofortes. By Maurice B. Adams, F.R.I.B.A. (retired) ... 415 & 416
"The Builder" Debate : XVI. The R.I.B.A. Development Proposals ... 416 & 417
Architecture of the Future ... 417
Notes on Illustrations ... 418
More Greek Studies. By W. R. Lethaby ... 430 & 431
Societies and Institutions ... 431 & 432
The Countryside Exhibition ... 433
The Housing Problem ... 433
The Craft of the Mason ... 434
The Powers of the Architect. By W. T. Creswell ... 434
British Industries Fair, Birmingham ... 435 & 436
Incorporated Institute of British Decorators ... 436
Architects' and Builders' Inquiry Bureau 437
The Week in Parliament ... 437
Workmen's Compensation Contravening Order ... 438
Builders' Foremen and Clerks of Works 439
The Concrete House Competition ... 439
Plumbing Trades' Apprenticeship Council 439
New Buildings in London ... 440
Rates of Wages in the Building Trade 441
Contracts, Competitions, etc. ... 442-444
Proposed New Buildings and Other Works ... 444 & 445
Prices Current of Materials ... 446

ARTICLES—*continued.* PAGE

Current Prices for Building Work in London ... 448
Tenders ... 449-452


### ILLUSTRATIONS


PLATES. PAGE

The National Provincial Bank, Southport. Messrs. F. C. R. Palmer and W. F. C. Holden, FF.R.I.B.A., Architect and Assistant Architect to the Bank respectively :—Exterior, 419; Detail of Entrance Front, 420.

Friends' College, Chengtu, West China. Mr. Arnold Silcock, F.R.I.B.A., Architect :—Main Entrance Gateway, 421; Plans and Elevations 422.

New Public Elementary School, Stanmore, Winchester. Messrs. Cancellor & Sawyer, F. & A.R.I.B.A., Architects ... 423-425

Drawings for the R.I.B.A., Intermediate Examination. By Mr. Hubert Bennett ... 426-428

Old Musical Instruments. From drawings by Mr. Maurice B. Adams, F.R.I.B.A. (retired) ... 415, 416, & 429

Kearsney Court, Dover : The Terraces. Messrs. Thomas H. Maw & Sons, Architects ... 408

Imperial Chemical House, Millbank. Sir Frank Baines, F.R.I.B.A., Architect; Mr. Alfred Cox, F.R.I.B.A., Associated Architect : Detail of Colonnade, 410 & 411; View from the Surrey Side, 410; The Refectory, 411; View from the Air, 412.



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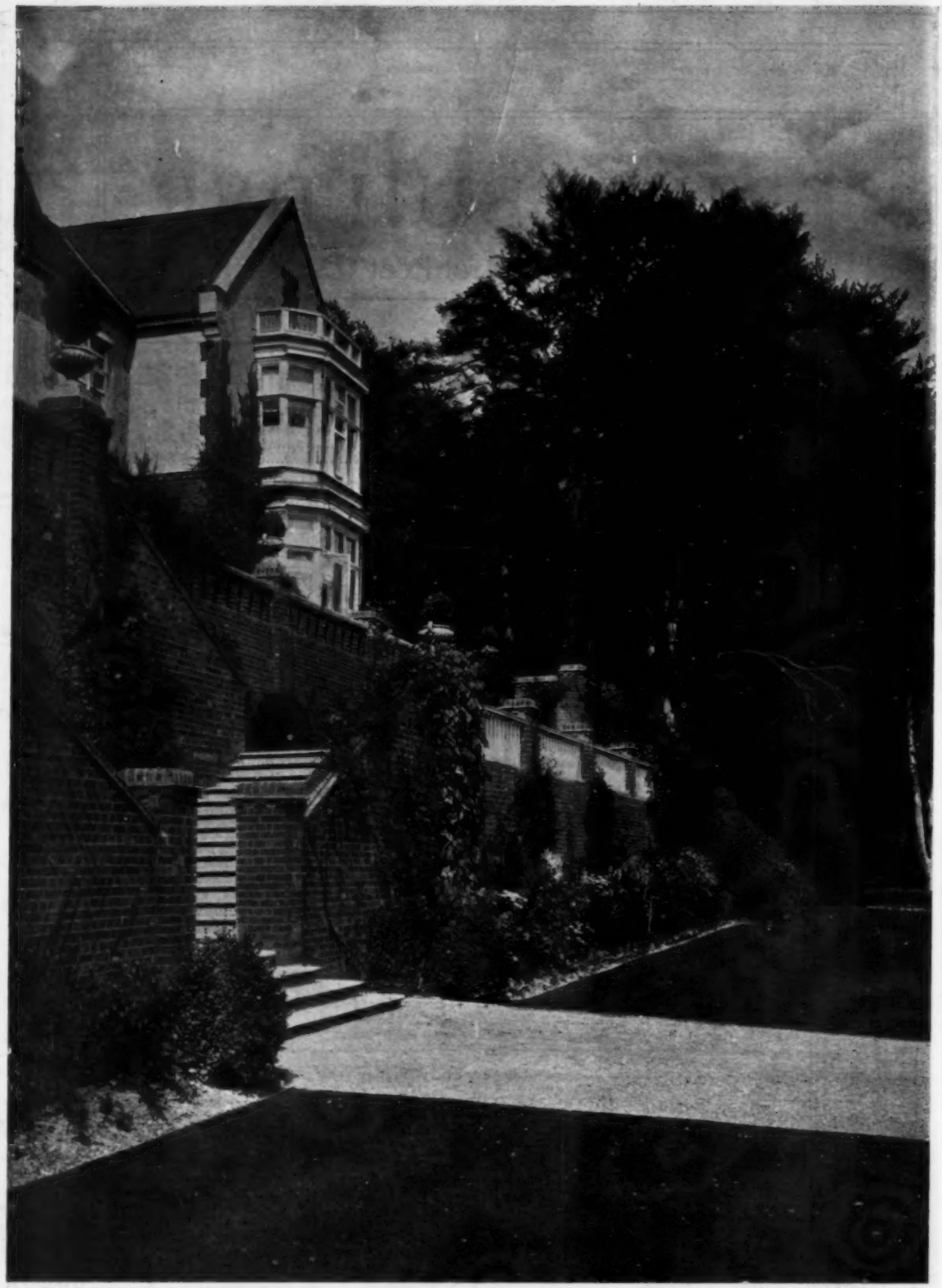
**87TH YEAR**



**Kearsney Court, Dover: The Terraces.**

MESSRS. THOMAS H. MAWSON & SONS, Architects.

# THE BUILDER

A JOURNAL FOR THE ARCHITECT AND CONSTRUCTOR

*WITH WHICH IS INCORPORATED "THE BRITISH ARCHITECT."*

VOL. CXXXVI. No. 4491. MARCH 1, 1929

## PLUMBING AND THE ARCHITECT.

IT is a human characteristic to seek a scapegoat whenever disaster, great or small, has paid its visit to a community. We are asked to blame the architect for the fact that a great many pipes have burst in the great frost of last week and the week previous to that, and as he is not by nature one to stand to arms in his own defence, he is likely to be condemned without a word, unless others say something on his behalf.

There have been quite a number of letters in the daily Press asking what the architect knows about plumbing and why he has not foreseen what has happened within the last week or two; and there is no doubt that a good many ignorant people retain the impression that the architect is an artistic fool with whom it is dangerous to entrust anything of a practical nature. Although the ignorant are a rapidly decreasing class, and although the architect is well used to receiving all the kicks and few of the ha'pence as far as his work is concerned, we should be failing in justice if we did not say something in his defence while events are fresh on our memories.

First let us assume that our plumbing is all wrong, and that foresight has been lacking, and let us ask ourselves why this should be laid at the door of the long-suffering architect. To our sorrow, there is little doubt that for every house in the country that has been designed and supervised by an architect, there are at least a score that have been under the single control of a builder. Yet we hear no blame attributed to the builder, although we are continually being reminded that it is the builder, big or small, who is the practically-minded man, and the architect the amiable theorist. We do not wish to transfer the blame to the builder, nor to suggest that the architect never makes mistakes in practice, but we do suggest that it is neither fair nor right that a single class of men should be blamed without good evidence, because the community has experienced a time of great misfortune.

The fact is, and we need not hide it, that our plumbing system generally follows a line of principle that has become far too common in many of our post-War courses of action. The term "good enough" has gradually superseded the good old-fashioned "best" that was once the guiding principle in matters of building. "All materials and workmanship are to be the best of their respective kinds" is an outstanding clause in the pre-War specification that still forms the model for those written to-day. There was a time when this meant what it said, but it must surely be held that in a very great deal of our work to-day it has rather a hollow sound, and is frequently honoured more in the breach than the observance. This "good enough" way of doing things is not by any means confined to building, and should not be thrown upon the backs of either the builder or the architect. It is just a relic of thoughtless War days, when the present seemed to be the only real thing in the universe, and even that savoured of unreality.

If blame must be placed, the general public must be held to task. It is they who have demanded the cheapest thing they can get, and have pointed to that cheaper thing in the next street when they have been advised not to spoil the ship for a ha'porth of tar. As a consequence, plumbing, like all other trades, has taken the shortest route to its objective. A pipe has to start at this point and arrive at that; therefore it must go as straight there as possible, whether it be roof space, outside wall, or on that side of the house where the sun never strikes, and where all the cold winds of the air beat. Discretion would suggest that another route would be better protection of the pipes; or that failing this as a possible alternative, the more exposed lengths of pipe might be wrapped in hair felt, and cased in. But this would mean so many extra hours of labour, and so many extra pounds of expense; and, further, that house round the corner has not indulged in such luxuries. So we have gone on, with the blessing of a sequence of mild winters, until our erratic climate has brought us abruptly to our senses.

We have not by any means done with the general public yet. In the past few days we have heard of an amazing number of instances where the stupidity and helplessness of the public have been made evident. Not once, but many times, have we heard of people who have lived for a week in a house, knowing that every pipe in the place has been frozen, and who have not only failed to turn the water off, but have not even troubled to find out where their stop tap was placed until the thaw brought the deluge. This would seem incredible, if such cases were not familiar to most of us. Then there are the others who have stoked up their furnaces knowing, or failing to ascertain, that they were frozen up. These have succeeded in overpowering the frost, but in unexpected ways, and we can hardly feel sorry for them. And, finally, there are those equally foolish and inconsiderate people who, knowing that there are hundreds of people in their neighbourhood waiting like them for attention, spend helpless hours on the telephone demanding priority of treatment from the plumbers of the town. In times like these the only sensible thing to do is to take one's place on the long waiting list, secure the house against further damage, and wait patiently, making the best of things.

The point that we would wish to make, however, is that a class of people containing so many foolish members have no right to blame their technical advisers whose good counsel they have so frequently flouted. Given a reasonable latitude as regards outlay, the good architect and the good builder are neither of them men to scamp details, and it is only when they are driven to the last penny that in despair they have given way to the "good enough" practice. But apart from all this, how far should the architect be concerned in these things? It is true that he has to specify them, and to see that they are carried out. But is he to be the man who is so familiar with all the crafts of building that he is able to take the tool out of any workman's hand and show him the way to do it?

The sooner we are honest with ourselves and recognise that it is impossible for one man to learn all the details of all the trades the better. And equally, the sooner it is recognised that every man engaged on a building shares to some extent the responsibility for its perfection the better. We have heard of architects who have been foolish enough to resent advice from the builder or tradesman. We have heard of builders and tradesmen who have been ignorant enough to carry out work in bad method and without calling attention to it, because it was specified and therefore not their responsibility. More frequently and happily, we hear of buildings upon which architect, builder and workman have formed a team, concerned for the perfection of the job first, and their own credit last. In such cases the word "responsibility" relates only to the duty of doing the best thing in the best way. A good many of our plumbing faults do not appear when jobs are run in this way, which is the only way.

There are few trades or professions where such a wide diversity of technical knowledge is required as in that of architecture. In many of its branches there is little chance of the architect acquiring more than a sound knowledge of their broad principles. The pose of omniscience in building practice has been rather forced upon him, and he would be foolish to maintain it.

As a last word, we suggest that the public should refrain from blaming their house-designers for their burst pipes, just as they absolve their motor manufacturers from blame for their burst radiators and cylinder jackets, and that they once for all abandon that "good enough" attitude in all their ways of living, which is the real root of half their troubles.

# NOTES

**The Country-side Exhibition.**

This exhibition, which is on view at the R.I.B.A. premises, 9, Conduit-street, until March 9, is one which is not only timely and necessary, but also is likely, through the excellence of its form, to achieve its purpose of bestirring public interest in national possessions. It not only decries the abuses that are ravaging England's countryside, but suggests better models for such things as petrol stations, advertisement boards, houses of the cheaper sort, signs, etc., The exhibits—which have been collected by the industry of Mr. Harry H. Peach, of Leicester—take mainly the form of photographs, which are sectionised under the titles of Roads, Advertisements, Filling Stations, Sign-posts, etc. The various frames contain photographs of "how not to do it," with further examples of how it is possible to achieve the same purpose without blatancy. The exhibits are well arranged and are labelled with pithy comments which add emphasis to the points made. The exhibition was opened by the Rt. Hon. J. Ramsay MacDonald, whose speech is reported on another page. The exhibition has already visited Leicester, Manchester and Liverpool, and, together with two smaller shows now visiting various towns, may be borrowed from the Exhibition Committee.

**Imperial Chemical House, Millbank: Detail of Colonnade.**

**Our Old Cottages.**

The work of preserving our interesting old cottages is proceeding gradually, if not as quickly as one could wish. Incredible vandalism is constantly being contemplated, but it is encouraging to find such instances as that proposed in regard to Thomas A'Beckett's cottages at West Tarring being defeated. A view of these is shown in the first annual report of the Fund for the Preservation of Ancient Cottages just issued. This report, issued by the Royal Society of Arts, will be read with interest and it is to be hoped it may lead to some action by which it will be possible to restore to habitable condition, many old cottages the owners of which are not able to incur the cost themselves. We know of instances where old cottages are well worth preserving if a very moderate amount could be found to repair them or enable their owners to do so. The amount of skill and attention needed to put these cottages in a sound and habitable repair prevent consideration as a commercial proposition, but the advice would be available if the actual cost of the work could only be forthcoming.

**The City Churches.**

Mr. G. K. Chesterton, in his recently published book of essays, "Generally Speaking," has included an entertaining essay upon architecture. It is clear that he is not on the side of those who would pull down the City churches. When he sees humanity in restrospect and perspective he finds their religion more interesting than their commerce. "The London churches do preserve a certain historic character of London; they do remind us of a typical passage in the history of England. But the merely commercial life of England becomes less and less English; and the

**Imperial Chemical House, Millbank: View from the Surrey side.**

Sir Frank Baines, F.R.I.B.A., Architect. Mr. Alfred Cox, F.R.I.B.A., Associated Architect.

material machinery of London is looking more and more like New York .... London has a soul of its own; it therefore has a soul to be saved; but nobody seems to bother very much about saving it. And it seems possible that the quaint old Wren churches might still do something towards saving the soul of London, even if we have given up all hope of any churches saving the souls of Londoners."

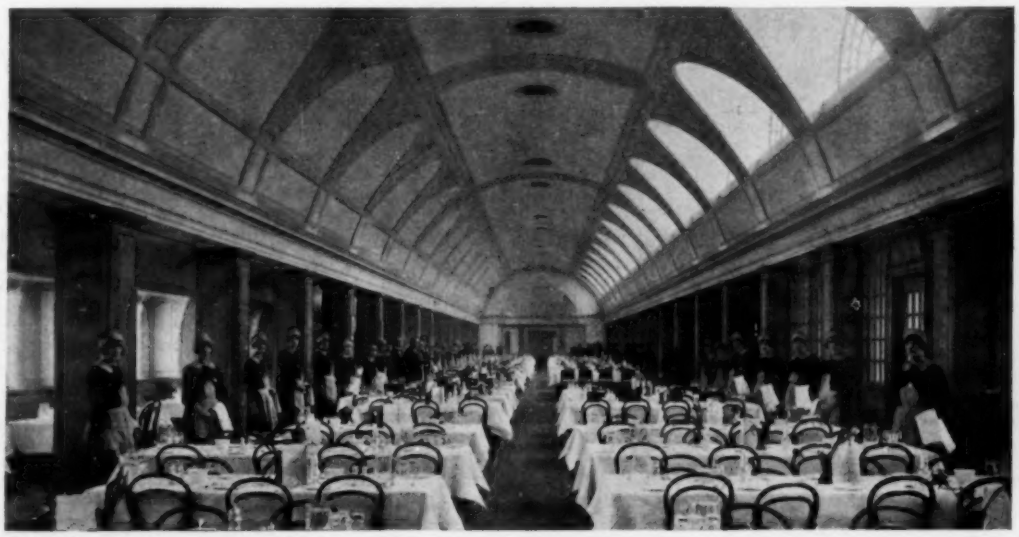
**The Skyscraper.** Mr. Chesterton in the same essay develops his philosophy of the skyscraper, by contrasting the spirit of Europe with the spirit of America. Culture being a thing rather of quality than quantity he reminds us that it is not the skyscraper that is nearest to the sky. A man "does not need anything but a neck to crane and eyes to goggle with in order to appreciate a skyscraper." He deplores the taste for mere size as being not merely more vulgar, but more backward and barbaric. "But even when the larger thing is all right in its place, it is here out of place. Even when it is good as a skyscraper, it is not suited to the sky." It is our English climate that leads Mr. Chesterton to believe that the best American architecture—which, he says, is Classical architecture—was built for a climate. "But even the invaders who have brought over American buildings have not yet imported any large blue fragments of American sky."

**Imperial Chemical House, Millbank: Detail of Colonnade.**

**Education.** The differences between education and a good education are many and various. When it is claimed that bad and ugly buildings are produced by defective education we are never too clear about the meaning to be conveyed. Buildings that would be discreditable to the profession of architecture would be regarded as wonderfully good efforts when designed by an amateur. For this reason, no doubt, many ugly buildings are regarded as good. Educated taste might say that the level of public taste can be raised—shall we say to that of the architect?—while educated taste might also say that one meaning of education is that the amateur will realise his weakness and consequently the enormity of his guilt. In matters involving taste and manners he will not inflict pain upon us.

**The Application of Education.** It is from education that we arrive at an aesthetic ideal, but not necessarily the aesthetic ideal of the specialist. In learning to appreciate that there is such a thing as art, all are not converted into artists; they have been taught to assess art at its proper level in our social structure. Quite recently the Archbishop of Canterbury very truly remarked that "the business of education is not to enable people to get on, but to know what to do with themselves when they are not getting on."

**Style.** Sir James Barrie's recent definition of style must appeal to many who have tried to deal with this elusive subject in words. "Style," he says, "is the way the artist paints his picture. No, it can't be so easy as that. All sorts of things seem so easy to me, until I read clever works about them."



**Imperial Chemical House, Millbank: The Refectory.**

# GENERAL NEWS

**Professional Announcements.**

Mr. G. Val Myer, A.R.I.B.A., has taken into partnership Mr. F. J. Watson-Hart as and from January 1, 1929. The style of the firm will be "Val Myer & Watson-Hart," and the address will continue to be at Abbey House, Victoria-street, S.W.1. Telephone: Victoria 9368.

Messrs. Jackson & Barker, architects and civil engineers, have transferred their offices to 200, Mount-road, Madras. Telephone: No. 3021.

Mr. John F. T. Christie, of Worcester, has been appointed by the Oldbury Urban District Council to carry out educational work under the Council's Surveyor.

The following appointments have been made to the City Engineer's and Surveyor's Department by the Leicester City Council:—Mr. E. E. Sherwood, P.A.S.I., of Liverpool, to position of quantity surveyor; Mr. K. Palmer, A.R.I.B.A., of Bradford, as senior architectural assistant; Mr. J. C. Richard, A.R.I.B.A., of Cardiff, as architectural assistant.

Mr. Claud W. Dennis, F.A.I., M.R.San.I., architect, surveyor, etc., has opened offices at Midland Bank-chambers, 58a, Newington-green, N.16; 143, Cannon-street, E.C.4; Wood Green; and Old Southgate. Mr. Dennis served his articles with the late Mr. Albert E. Pridmore, surveyor and architect.

**Mr. Harrison Townsend's Estate.**

Mr. Charles Harrison Townsend, F.R.I.B.A. (77), of Murray-road, Northwood, Middlesex, left £159.

**A Surveyor's Estate.**

Mr. Harry William Smith, Chailey, and Great James-street, Bedford-row, W.C., surveyor (net personalty £14,235), left £37,119.

**New L.C.C. Housing Scheme.**

The London County Council has begun an extensive housing scheme on the old Paris Garden estate on the south side of Blackfriars Bridge.

**West End Theatre Reconstruction.**

The board of the Associated Theatres, Ltd., owners of the Apollo Theatre, are considering the complete reconstruction of the interior of the theatre in order to increase the seating capacity. The architect to the company is Mr. Bertie Crewe, of 75, Shaftesbury-avenue, W.1.

**Garden City for Dudley.**

Dudley is to be provided with a garden city to relieve the present housing congestion, and the total cost of the scheme will involve an expenditure of about £750,000. As a beginning the corporation propose to erect 550 houses and to let or sell other land for development by private enterprise.

**Chadwick Public Lectures.**

This month the third "Bossom Gift" lecture, on "The Making of a Modern Building," will be delivered in the lecture hall of the Royal Society of Arts, by Mr. Mowlem Burt, who will show and describe a film of the building of Imperial Chemical House." Admission is free to this, as to all Chadwick lectures, and no tickets are required.

**North-East Coast Exhibition.**

The great North-East Coast Exhibition, which is to be held at Newcastle-on-Tyne from May to October, is rapidly taking shape so far as its construction is concerned. The principal structures are the palaces of engineering and industries. These have a combined floor space of 260,000 square feet. The work is estimated to cost £250,000.

**Proposed American Memorial.**

A huge monument to America's greatness, costing £11,000,000, is being planned by Mr. Paul Kroeger, a New York capitalist. The monument as planned would be a building about 400 ft. square, of granite and marble, in which would be displayed historical relics of the nation. It would be "the tallest tower in the world"—1,500 ft. high—and would be capped with a light of 24,000,000 candle-power having a radius of 300 miles.

**Old Jewry to be Rebuilt.**

Within the next few weeks the demolition will be started of No. 26, Old Jewry, the chief offices of the City of London Police, which have become inadequate and are to be replaced by up-to-date new headquarters, with offices for the Commissioner and Assistant Commissioner, the heads of the uniform and detective departments, and a residence for the Chief Clerk. It is intended to preserve the present court by which the building is entered, but an improvement will be effected by having another entrance and exit in Ironmonger-lane, the Corporation having recently purchased property in that thoroughfare for this purpose.

**Public Baths Extension, Derby.**

After protracted negotiations, Derby Corporation have secured permission from the Ministry of Health to proceed with a scheme for baths in Queen-street. Plans have now been prepared for setting the baths back, leaving land for shops along the front, except for one entrance to the baths. Another entrance will be made in Walker-lane. Two swimming baths and slipper baths will be provided, and will replace those now in use in Full-street. The scheme, without shops, is to cost between £80,000 and £90,000.

**Miss Emma Knight.**

We regret to announce the death, at Bath, on Saturday, February 2, of Miss Emma Knight, at the age of 74. "Her drawings and paintings of ancient stained glass," writes a friend, "are remarkable for their careful study and technique. Amongst these will be remembered her remarkable drawings of the ancient stained-glass windows at Fairford Church, Gloucestershire, which appeared in *The Builder* in 1891. Of late years, Miss Knight had been suffering from failing eyesight, which deprived her of her artistic pursuits."

**Study of Archæology.**

Mr. C. R. Peers, H.M. Chief Inspector of Ancient Monuments, lectured at University College, London, recently, on "Archæology and the State." It was the first of a series of lectures in connection with the exhibition of recent work in British archæology now being held at the college.

The lecturer said that the exhibition was one of first-rate importance, not only for what it had to show, but because it marked a definite stage in British archæology. For the first time in history they had before them a demonstration of the combined results of the scientific examination of our native antiquities. Two thousand years of history and an immeasurable space of pre-history had left us an infinite amount of material to deal with in all degrees of preservation, of immense actual and potential value to the country. By the mere fact of its existence it added beauty and meaning to our every-day life, though its supreme importance lay in the knowledge to be gained from it.

The lecturer described with the aid of lantern slides some of the investigations which had produced the objects in the exhibition, and said they ranged from the Palæolithic Age to the 14th century. Those being carried out in Wiltshire opened up an entirely new period in British history, and many new facts had been discovered only this year by humble excavators. The pity was that private work and State enterprise could not be combined.

**THE IDEAL HOME EXHIBITION.**

At Olympia, on Tuesday, this exhibition was opened by the Lord Mayor and Lady Mayoress, who were received by Sir George Sutton and others. One of the features of the exhibition is the "ideal" fountain, which was started by the Lady Mayoress, after which the prize-winning concrete house was visited. This house was designed by Mr. D. F. Martin-Smith, A.R.I.B.A., and selected from some 700 designs which were submitted in the competition. The exhibition contains much of interest, including several houses of different character. The "Georgian" one, designed by Mr. H. T. B. Barnard, is particularly pleasing, both in plan and elevation. Of unusual interest is the feature entitled "Bedrooms through the Ages." Under the direction of Mr. F. R. Yerbury, a series of bedrooms has been erected and furnished with appropriate furnishings of their various periods, and each occupied by a lady, also in correct costume. The rooms include a primitive form of shelter, the cave of the prehistoric era, a Victorian Room, a Japanese room, and the room of to-day.

**Imperial Chemical House, Millbank: From the Air.**

Sir Frank Baines, F.R.I.B.A., Architect, Mr. Alfred Cox, F.R.I.B.A., Associated Architect.

# COMPETITION NEWS

**Schools at Boythorpe, Chesterfield.**

The assessor in the limited competition for proposed new schools at Boythorpe, for the Chesterfield Education Committee, has recommended for acceptance the plans submitted by Messrs. Wilcockson & Cutts, architects, 12, Saltergate, Chesterfield, and these have been approved.

# CORRESPONDENCE

### Building Trades Parliament.

Sir,—I have read Mr. J. E. Drower's letter in your issue of February 22 with interest, and note in the last paragraph of his letter he says: "The problem of how to form Councils which will be truly representative and whose findings shall be acceptable to employers, employed, and the country at large, is one which requires anxious and careful thought."

If you will be good enough to refer to your files, you will see that, on March 27, 1914, I did suggest the constitution of a Conciliation Board, which, to my mind, would achieve the desired results. I have, from time to time since that date, referred in your columns to my proposals of 1914, and particularly in 1919, after the meeting in May at the R.I.B.A., when there seemed to be some hope of arriving at peace in the industry. After the failure of the Building Trades Parliament, and the refusal to accept the Interim Report of the Foster Committee, I again raised this question in your columns.

Since my proposals for the building industry in 1914, referred to above, which included representatives of the community on the Conciliation Board, other industries have adopted the principle of representation of the public on similar boards, viz., the National Wages Board for Railways, established in 1920, and the Tramways Tribunal in 1924, and I think, also, the board dealing with the payment of municipal employees.

If, as Mr. Drower suggests, and I certainly hope, that the time is now ripe for reconsideration of the Building Trades Parliament, it may be helpful if you would be good enough to reprint that letter of 1914.

John E. Yerbury.

[We regret that, owing to the exigencies of space, we are unable to reprint Mr. Yerbury's letter in full. The following points, however, convey the gist of his proposals:—"A Conciliation Board, consisting of: 12 representatives of employers, 12 representatives of employees, 12 representatives of the general public, with a well-known public man as chairman. The representatives of the public might be nominated by the R.I.B.A., the Surveyors' Institution, and the Institution of Civil Engineers, at the request of employers; also by the Workers' Education Association, the Club and Institute Union, and the Working Men's College, at the request of employees. This would ensure representation by those most nearly interested, although indirectly, in industrial conditions and more or less associated with the building trade.

"Decisions should be arrived at by secret ballot, in order to leave everyone free to vote without the very real feeling, which many people suffer from, that it is disloyal to vote against the majority of one's own associates on a representative body. Pending decisions, work would be carried on under existing agreements. The Employers' Association and the Trade Unions would undertake to expel any member who acted contrary to the decisions of the Board. Such alteration in the law as would ensure the sanctity of contract would be pressed in Parliament."—Ed.]

### Stained Glass.

Sir,—I find in your last issue, illustrating an interesting article by Mr. Reginald Hallward, some examples of stained-glass design, every one of which exhibits what to me is a very serious fault. Few will deny that decoration should never disguise or distort the practical object of the thing decorated. For instance, a stained-glass window is intended as a screen from wind and rain and for the admission of light of a more or less modified quality; therefore it should not be made to look like a picture. The former should possess the characteristic of translucency, whereas the painting should not. To give the effect of protection, and preserve the unity of surface of the window as a whole, a narrow line of white glass was always put (in the best periods) between the stained glass and the tracery and stone jambs. And the best stained-glass designers never made their design carry on from window to window. If the design appears to go behind the mullions, it suggests a picture of which a part is hidden and as if the tracery and the stained glass were not on one and the same plane, so far destroying the weather-screen effect. And, in addition, it tends to reduce the apparent thickness and strength of the tracery. If, then, decoration should never disguise or distort the practical object of the thing decorated, it must follow that to shade and make anything in the window look round or solid is to damage the effect of translucency. The early stained-glass designers were able to impart exquisite spiritual feeling to heads and figures in their design, without shading or effect of solidity. Why cannot we?

C. F. Annesley Voysey.

In reply to the above letter, Mr. Reginald Hallward writes as follows:—

Sir,—I find myself much in agreement on the general principles advocated by Mr. Voysey for the treatment of glass, and in my next article the subject to which he refers is specially called attention to. No doubt there has been much overshading and matting of glass in the past, and in calling attention to this the writer offers good counsel. With Mr. Voysey's description of the purpose of a window, which is to give light, there can also be little disagreement. But I distinguish between the border round a window, which is generally desirable, and "a narrow line of white glass," which is not. I believe this latter has, however—if I am rightly informed—been added in the case of some of the windows in York Minster, undergoing repairs. The result of this is to me as though the window were hanging loose and detached from the masonry, the fundamental requirement of architectural relationship being lost.

As to carrying through a design from light to light, it is, I think, dangerous to lay down any formula, but there are instances of this being done successfully. It all depends on the artist. One man may steal a horse, while another cannot look over the wall; and to deny the use of shading is a hard saying, and the writer must forgive me for challenging such an opinion altogether, unless we are to remain within the primitive interpretations of the earliest glass. There is no reason whatever why shading within the proper limitations of its use should disturb to any unreasonable extent the light-giving properties of a window; while in the hands of an artist it adds resources of additional beauty of which the primitives never dreamed. We need not, surely, be less spiritual because we have enlarged the resources of interpretation; this should rather help us to be more so.

Personally, I would not lay down too much what should be done, but would leave all free. If glass looks right, it is right, whether treated in more elementary ways, or in the full diapason of our more developed resources. The reason for the decline of stained glass last century was that painters unacquainted with the limitations of the material tried to paint pictures, and it subsequently almost left the artists' hands altogether for the antiquarian and the tradesman. Now we are getting it back again to the artist; but, though finding much general agreement with Mr. Voysey's point of view, he must not tie art to a period, or wish to limit its freedom of interpretation.

Reginald Hallward.

### The Assuan Dam.

Sir,—The Council of Ministers meeting under the presidency of H.M. King Fuad on January 30 made a momentous decision with regard to the comprehensive programme of works submitted by the Ministry for Public Works, and approved the allotment of credit (£E.3,800,000) necessary for the heightening of the Assuan Dam, at the same time authorising the Minister concerned to take the necessary steps for the execution of the project in such a manner as not to be incompatible with the possibility of generating electricity by means of the fall of water.

This decision was resultant on the publication of a "Report of the Technical Commission appointed to consider the Further Heightening of the Assuan Dam so as to impound water to R.L. 120.00."

This report is a most interesting document, dealing with the existing conditions and future requirements in a very clear and concise manner. The Commissioners had in front of them (*a*) a scheme drawn up by Sir Murdoch MacDonald & Partners; (*b*) a scheme prepared by Professor L. Pottérat; (*c*) three alternative projects proposed by the Director-General of Reservoirs. Of these they gave most favour to the first, but at the finish put forward their own proposal. There is at least one point in the description of the Commission's scheme which calls for comment.

The proposed works include the building of large buttresses on the down-stream side of the existing dam, these buttresses to terminate at the level of the present roadway. Above this level a new wall is to be built (presumably 9 or 10 metres in height), and on this wall the vertical lines of the buttresses are to be produced; probably a pseudo-æsthetic requirement. The following extract from the report explains the method proposed:—

> "Referring to drawing No. 1, you will observe a typical cross-section above elevation 87.50 for the pierced section of the dam and a similar cross-section for the solid dam. . . . A study of drawing No. 1 will show that we propose a horizontal joint between the main buttress and the false buttress of the heightened portion, which joint will always be open at least 2 centimetres at times of maximum ambient temperatures. . . ."

It is surprising, in such a masterly report, to find a recommendation of false work of any nature (and, apparently, a useless mass of material), and the more amazing this suggestion becomes when we read a few paragraphs on, and come to the following:—

> "Before stating our reasons for favouring the adopted design, we wish to make the following declarations:—
>
> "(*a*) It is our opinion that the existing Assuan Dam represents engineering of a high order and of monumental character. We are forced to wonder whether the designers and builders of this great dam were not inspired to special effort by the fact that the dam is built in a land famous the world over for great and enduring monuments. We are not only deeply impressed with all the engineering conceptions that produced the Assuan Dam, but we are especially impressed with the super-excellence of workmanship in executing those plans.
>
> "(*b*) We have a very keen appreciation of the fact that the security, health and happiness of more people now depend almost entirely on the safety of the Dam than ever before in its history.
>
> "(*c*) We are conscious of the grave responsibility assumed by any engineer, or by any Government of Egypt, when they undertake to increase the load on the existing dam where the existing masonry has worked so well for many years."

Possibly the engineers have been led astray from the narrow path of truth in construction by some desire to strive after an "architectural" effect; but, be the reason what it may, it is to be hoped that before the design is carried into execution any such faked excrescences may be eliminated. A pleasing conceit might conceivably arise through the mere omission of the "false" buttresses, whereby posterity might readily discern the dam to be a creation of more than one generation of engineers and applaud the skill of those responsible for the additions.

G. S. Mileham.

Enfield, Middlesex.

# THE ARCHITECTURAL ASSOCIATION

## ARCHITECTURAL ETCHINGS.

An ordinary general meeting of the Architectural Association was held on Monday at Bedford-square, W.C., Mr. W. H. Ansell (President) being in the chair. A vote of condolence was passed, all standing, with the relatives of the late Mr. O. R. Goodman and Mr. F. T. W. Goldsmith.

There were two candidates for nomination and ten for election. All these were agreed to.

Mr. Campbell Dodgeon, C.B.E., M.A. (Keeper of Prints and Drawings, British Museum), then gave an address on "Architectural Etchings," illustrated by lantern slides. In the earlier part the lecturer traced the history of etching, which was, he said, in its origin third in antiquity among the principal varieties of processes used in printing. The woodcut, so far as our knowledge went, dated from about the end of the fourteenth century, and line engraving from about 1430, while the earliest date on an etching was 1513. Considering in what way and for what purposes these various processes were applied to architectural subjects, no pre-eminence could be claimed for etching—line engraving had been much more extensively used. Perhaps the greater solidity of line engraving, its firmness, the stronger blacks and greater depths of shadows by which it enabled the engraver to bring out the relief of mouldings, architectural cornices, etc., had made it a greater favourite than etching with architects and the historians of architecture. Etchers had generally approached architecture either in the spirit of antiquarians—as Hollar, when he etched the illustrations to Dugdale's "Monasticon"—or as one among many other subjects which attracted their attention, stimulated their imagination or provided them with their daily bread and butter. Preoccupation with architecture on account of its romantic or picturesque associations was a comparatively modern habit.

In the works of fifteenth and sixteenth century engravers and etchers—as in the pictures of the Italian, Flemish and German painters—architecture was very much studied with a view to providing appropriate backgrounds for figures in biblical, historical or mythological subjects. Many of the audience would know the beautiful renaissance architecture which formed the background to Madonnas and saints by the early Florentine engravers, and the exquisite studies of mediæval town walls, towers and gates which Dürer had put into the backgrounds of his St. Anthony, the Virgin by the Wall, and other engravings. But architecture in isolation was of rare occurrence. There was one great architectural engraving of the Lombard school, the renaissance interior ascribed to Bramanti, and at least designed if not engraved by that great Milanese architect. By the early German and Flemish engravers there were numerous designs for late Gothic fonts, niches, tabernacles and the like, properly adorned with pinnacles and crockets, and accompanied by ground plans, as to which it was doubtful whether they were intended to be executed on a big scale in stone, like the enormous "Sacraments-haüser," reaching almost from floor to roof, which might still be seen at St. Lorentz at Nuremburg and other south German churches, or whether they were designs for work to be carried out in metal on a very much smaller scale by silversmiths and goldsmiths.

The lantern slides followed, beginning with a view of the interior of the Gothic synagogue at Ratisbon. This print, said the lecturer, was by Altdorfer, who was himself not only a painter, engraver and etcher, but a practical architect, holding the appointment of official architect to the city until his death in 1538. In this slide the interior of the synagogue was shown—a small but rather lofty Gothic building divided like many Bavarian churches into two aisles by a row of columns down the centre—without any figure or any pretence of subject except the architecture itself.

Among other artists examples of whose work were subsequently shown, were Bonifacio, Callot and Hollar. Hollar, said the lecturer, was the principal, if not the sole etcher of architecture in England in the seventeenth century. He sketched every variety of subject, and his plates numbered about 2,700. Many of these were topographical.

Etchings by Carlevaris, Canale and Piranesi, illustrated the work of the eighteenth century. Of the last named artist the lecturer showed four etchings, including one of the Blackfriars Bridge which preceded the present structure. The view showed the bridge in a very early stage of construction in 1764. The place was etched by Piranesi at Rome, and published in 1766. The etching was made from a drawing supplied to Piranesi by the architect Robert Mylne, and so far as was known to the lecturer, it was the only case of an etching by Piranesi relating in any way to England.

Coming down, then, to the middle of the 19th century, the lecturer said that the etchings of Meryon, like those of Piranesi, were so well known and had been so much eulogised that there was no need to speak of them at length. One of Meryon's most celebrated was Le Petit Pont, done in 1850. La Morgue and L'Abside dated from 1854. This set was celebrated. Curious additions were made to some of these plates afterwards, but as they were originally etched they were free from eccentricity. Meryon suffered in 1858 from a mental disease which necessitated his confinement in an asylum for more than a year. In 1866 he was confined again, and he died insane in 1868. Not many of his etchings produced after the first attack of insanity were of great importance, and his fame rested chiefly on the group of Paris etchings, 1850-1854. La Morgue and L'Abside were generally considered the finest of the set. La Morgue contained a masterly distribution of black and white spaces, and a perfectly successful treatment of windows, roofs and chimneys, rising in a curious succession of different levels from the riverside. There was a motive of poignant interest in a dramatic group on the left bearing the body of a drowned man from the Seine towards the "Doric Little Morgue," as Browning called it, on the right. In drawing architecture Meryon always worked upwards from the bottom, saying that buildings were begun from the foundation, and that the artist should follow the same method as the builder. Another peculiarity of his practice in drawing architecture was that he deliberately renounced any competition with the photographic camera, claiming the right to arrange the different parts of what he drew in the manner best calculated to convey a certain impression, while pursuing the utmost exactness in the representation of detail in each part. In Le Petit Pont the towers of Notre Dame were much too high in the etching in regard to the actual dimensions and to the laws of perspective. This was because after taking a drawing from very low down near the edge of the water, Meryon drew the towers again from the level of the street as the passer-by would habitually see them. He fitted the second drawing with great skill into the former one, making a composition which produced the desired effect of impressive and majestic might, while all the details were absolutely accurate, though on reflection it might be discovered that they could not all be seen at once. L'Abside de Notre Dame was a justly famous masterpiece, for copies of which higher sums were paid to-day than for any other etching, except some by Rembrandt. The design of the whole plate, the lighting of the sky and of the side of the majestic cathedral, the proportion of the towers and high-pitched roof of Notre Dame to the massive but comparatively insignificant buildings along the line of the Seine, combined to produce the effect of unrivalled dignity and charm. La Rue des Chantres, which dated from 1862, was a very beautiful etching in the early state before the plate was marred by the insertion of an irrelevant bell hanging in the sky. Meryon had been followed in chronological sequence, though not "followed" in any other sense of the word, by a whole tribe of etchers who had etched and were still etching cathedrals. Among these were Axel Haig, a Scandinavian, while another was August Lepère. Lepère's famous etching of Amiens Cathedral on the day of the taking of the inventory, showed the sunlit architecture, sensitively drawn, in effective contrast with the passions of the swaying mob in shadow. But the companion plate of Reims Cathedral was far from achieving an equal success.

Returning to Venice, the lecturer showed an etching by Whistler and another by Cameron. Of Muirhead Bone, he said that he was one of the greatest living etchers of architecture, and betrayed in his early work the study of Meryon. Such etchings as The Old Jail and the Pontine Gates contained something of the same suggestion of grime and crime and misery as Meryon could put into his etchings of Paris. Bone, who had spent a period being actually trained in an architect's office, approached architecture with a different equipment from that of the many artists who observed it merely from the surface with the eye of a painter. Both his solid understanding of construction and the marvellous long sight, which he shared with Meryon—who could see with the naked eye details for which others needed a telescope—stood him in good stead. Belgrave Hospital, which dated from 1902, was the first etching, or rather dry-point, that Bone made in London. This could be dated by some posters which were shown in it.

The next slide illustrated the etching of the Monument by Francie Dodd. Showing an etching by Walter Sickert, the lecturer said that theatre and music-hall subjects were among Sickert's most characteristic works.

Of Griggs, the lecturer said that his work fell into two quite distinct classes, both represented in the exhibition now going on at the Architectural Association. Some were representations of actual existing buildings, chiefly spires and towers of churches. More characteristic were imaginary mediæval buildings invented with extreme plausibility. Griggs was a fervent admirer of the Gothic. He was also a devout Roman Catholic, and spent a great deal of time dreaming imaginary buildings, such as he would wish to see in modern England. He fixed some of these dreams on paper and in this way had constructed a number of abbeys, churches, bridges, town gates, and so on, of very beautiful Gothic architecture, etched with extreme beauty, and printed with scrupulous care.

Several of these were shown on the screen and afterwards a specimen of the work of a very different artist, Fred Richards. This was "The Street of the Forgotten Name," at Ludlow. A specimen of the work of the American etcher, Hermann Webster. "La Maison Malines," was shown. This artist, said the lecturer, excelled in etching of a rather simple kind in Paris, Frankfort, and other Continental towns. An etching by Ray-Jones followed. "A very Characteristic bit of the Streets of Old Paris, very excellently observed."

Other etchers, examples of whose work was shown, included Brangwyn, Rosenberg, and Anderson. Lastly, came one of the etchings of the Australian etcher, Lindsay. This artist, the audience was told, had been exploring almost every part of Spain, producing beautiful water colours and very fine etchings of the scenery and architecture of that most delightful country.

A vote of thanks was heartily accorded to the lecturer.

# HISTORIC ORGANS AND PIANOFORTES

BY MAURICE B. ADAMS, F.R.I.B.A. (RETIRED).

THE comprehensive International Exhibition of Antiques, held in July last, at Olympia, was largely devoted, of course, to the display of historic furniture, all of which was excellently shown. By no means the least interesting feature was the choice assembly of old musical instruments, especially the organs, virginals, harpsichords, and pianofortes. Much interest essentially belongs to their decorative and artistic character judged as traditional cabinet work and structural shaping for the purposes of each piece. This is understood, apart from their intrinsic value as survivors of bygone ages in a musical sense, because most craftsmen and architects remain primarily concerned with the formative geneses of such treasures leading up through the advance of centuries to the lordly instruments of the present day, with their atmospheric systems and electric power accessories, in the building of organs and working them, besides enabling the organist to control his instrument at a distance with perfect efficiency.

The vast collection of antiques shown at Addison-road last summer included some of the masterpieces got together during the spring by the British Antique Dealers' Association, and displayed in the Grafton Galleries with much success. That show, no doubt, served as a precursor to the *Daily Telegraph's* Olympian display, which will be long remembered. Likewise, in this connection it ought not to be forgotten how the Burlington Fine Art Club consistently, on several occasions, helped by well-chosen displays of the best craftsmanship of the past, while its capital exhibition of "fakes" in Savile-row a few years ago was distinctly opportune.

The loan collection of antique furniture and decorative craftsmanship exhibited during the past month at Lansdowne House has been so successful that the promoters extended the display for several days up to yesterday. This growing interest by the public is most encouraging, inasmuch as an intimate acquaintance with the best work of the past is essential to the formation of good taste, but mere dilettantism will not suffice. Modern design and creative artistic production cannot progress unless contemporary needs are met by working on original lines, always keeping in mind the spirit of these traditional masterpieces. The Ideal Home Exhibition at Kensington, opened by the Lord Mayor of London last Tuesday, comprises, from what we have seen, not a few admirable examples of furniture and decoration, as well as fittings for domestic equipment, quite equal in every respect to the work of the historic periods. Such a standard necessarily is unattainable by wholesale production, and the best work has to be looked for as it is refined and not obtrusive.

The accompanying sketches of organs and pianofortes corroborating the above references to current exhibitions may perhaps best speak for themselves. In a general sense, the subject of musical instruments, judged as such, is much too large to be dealt with in our available space here and now. That restriction necessarily also prevents more than a passing mention of the abounding importance of our big National Collection of arts and crafts, which meanwhile goes on wisely accumulating in the spacious galleries of the Victoria and Albert Museum at South Kensington.

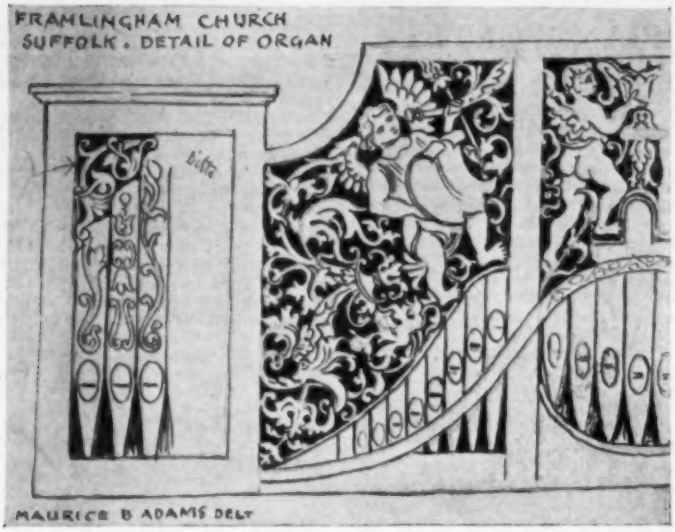
The little diagrammatic reproductions (p. 429) shown by Figs. 1 and 2 (from Kircher) show the initial mouth-organ and its earliest connection with the most elementary form with bellows below. The quaint sketches from ancient MS. reproduced in the bottom corner, on our same sheet, give a graphic idea of manual bellows first used; while the second diagram, from Constantinople, exhibits two men standing treading this bigger blowing contrivance, which is set on a level with the organist. Below, copied from the "Psalter" of Edwin, in the Cambridge University Library, is shown a primitive organ of the twelfth century date, pumped by four men at the ends, and played from the rear. The missal handbook, from Milan, gives a contemporary representation of a fifteenth century organ, with the keyboard to its front (see *B*, p. 429).

The Portatif Italian organ from the Brussels Conservatoire, shown in a sketch on page 416, was one of the old instruments employed in processionals, and set down at intervals, when halts occurred, to facilitate the chanting of antiphonal litanies in the open air. At Olympia, two of these old portable organs were shown by Messrs. Rushworth & Dreaper, of Liverpool. Viollet le Duc illustrated another type from Munich, with the bellows set behind, and the organ carried by a strap. The typical chamber organ shown on p. 429 is Italian with figured painted folding doors. It comes from Brussels. The elaborately carved foliated spandril of its front will not bear comparison with the similar English Renaissance enrichments seen at Framlingham Church, in Suffolk (see page 416). This is, no doubt, a very superior choir organ, rather small in scale, with the pipes elegantly enriched in colour. At South Kensington, from Santa Cruz, Madeira, a positive organ of sixteenth century date, with a horizontal surmounting cornice, has similarly carved interspaces set between three series of pipes. The foliations, however, do not compete with this East Anglian example. Also in the Victoria and Albert Museum, there is a fine English standard "organ-hurdygurdy," richly elaborated with inlays of pearl and ebony, dated 1750. The sound of the hurdygurdy proper was produced by the vibration caused through the resined strings being kept in contact with the rotating disc of wood, thus analogous with the violin in its action.

A "bottle organ," included in the Olympia collection, lent by Messrs. Rushworth & Dreaper, was dated 1798, and came from a church in Heligoland. The bottles of various sizes produce different tones by blowing across their mouths, all controlled by a foot blower. These organs did not need tuning. The barrel-organs obtained their name from the revolving cylinder on which the notes of the tunes had been pricked, and in action controlled by a rotary handle. Some years ago, on one of the annual excursions of the Architectural Association, where the visitors were met at the church by the vicar, the sexton rushed helter-skelter on their arrival to turn the barrel-organ in the aisle, thus ensuring musical honours for the occasion. A familiar tune, after some obsolete hymnal, ground out thus, seemed incongruous and amusing.

**A Developed Spinet.**

The upright grand piano shown on p. 429 is certainly a very unusual kind of instrument. There happens to be nothing like it in the Victoria and Albert Museum. There are several harpsichords, however, midst them being the "organ harpsichord," with strap work and its interior decorated in colour with the subject of Orpheus. It is called a "Glaviorganum," made by Lodosvivan, in 1579. It came from Ightham Mote, and is shaped like the body of a grand piano-




forte, not unlike the Italian "Glavicembalo" (1521), by Geronimo di Bologna, in the same gallery. This upright grand pianoforte from the Brussels Conservatoire dates about 1745, made by Frederici de Gera, and was technically known as a Clavicytherium, built upon legs. The nearest approach to this piece to be seen in the Victoria and Albert Museum to-day is the "Euphonican" (or English piano) of 1840, because it has at its rear a harp-like scroll frame fitted with the strings, and set at the left back corner of the instrument, which is described as "Steward's Patent," provided with its soundboards for tenor and bass. In conclusion, special mention should be made of the virginal, of seventeenth-century make and executed in oak, painted inside with Adam and Eve, the strings being exposed to view. It stands on turned legs, not unlike those of our upright grand. This instrument has rather clumsy keys. Note, however, the refined elegance of the fret-cut circular panel in the body of its case (see *A*, p. 429).

Some highly elaborate and beautiful grand pianos were designed by Royal Academicians such as Alma Tadema and Sir Graham Jackson, who also built some notable organs for important buildings. Church architects, however, generally failed to do justice to this instrument, particularly in the early days of the Gothic revival, when the silly mistake was made of poking them into what was termed "organ chambers" having an insufficient opening in front and none at sides for lateral escape of sound. Sir John Soane likewise, before their time, showed the same want of care when he built St. Peter's Church at Walworth (20 years before his death) in 1825. Insufficient height was provided in the west gallery for his organ, so that holes had to be cut in the ceiling to allow fixing the bigger pipes in position. Thus its principal stops were entirely cut off from the church for seventy years, their sound being lost in the roof. This blunder was discovered when the late Canon Horsley, on becoming Rector in 1893, removed the galleries and re-erected the organ next the choir.

The late Heathcote Statham, a most accomplished organist, advocated placing church organs "for musical effect" high up at the east end of chancel behind the altar. Provided the "Holy Table" is covered by a good baldachino, with ample space to the rear for a tribune or choir, as happens at Westminster Cathedral, this proposal might be possible, but in an ordinary parish church the idea would perhaps be considered out of accord with the devotional spirit of the sanctuary. If the chancel is high and wide enough a good position for the organ is afforded on the north wall over against the sanctuary.

Italian Organ BELONGING TO THE BRUSSELS CONSERVATORIE

# "THE BUILDER" DEBATE

## XVI.—THE R.I.B.A. DEVELOPMENT PROPOSALS.

"That the R.I.B.A. Development proposals are sound, and should be accepted by all its members."

Sir,—The most commonly heard objections to the R.I.B.A. Development proposals fall under several distinct heads, and I think all of them can be shown to be fundamentally unsound.

Briefly they are as follows :—

(1) That membership of the R.I.B.A. should be a distinction shared only by those who have passed a test;
(2) That it is unfair upon those who have gone through the strain of examinations that others should reach the objective without effort;
(3) That it is lowering the standard of membership of a learned society;
(4) That each time the Licentiate class has been reopened it has been professedly the last time;
(5) That in this case it can serve no useful purpose.

With the first I agree as a statement of principle, but not as an argument against the proposals. Members of the R.I.B.A. can rest assured that no architect will be admitted to the Licentiate class without due investigation on the part of their representatives. If they are not satisfied with this, they must themselves share the responsibility for electing those representatives, and if this does not satisfy them, then they may as well give up the R.I.B.A. as a hopeless case. As a matter of fact, examinations, as a test, are not by any means infallible, and most will agree that a good many men have gained admission to the Institute by this means who are no great credit to their profession. These things cannot be helped in a fallible society. But the important thing is that membership should be gained by test; and this principle is maintained under the R.I.B.A. proposals. I think this deals fairly adequately with the first objection.

I have some sympathy with the second objection, because I can well remember how much I resented the first opening of the Licentiate class. But it is the objection of youth, and youth is not famed for long vision. Let those young men who feel that way consider that with all their cramming

ANCIENT HAND ORGAN M.B.A.

for the examination, their effort has been less than that of the man who has worried his way through years of practice to a stable position in his profession. It would be unreasonable for many of these who have proved their competence to have to pass the identical way of the younger men, and the profession would be much poorer in talent if some of these were called upon to learn their theory by heart once more with the object of answering to a standard test. These young men are fortunate to be able to arrive at a diploma of competence before their experience has been tested in the more severe examination room of actual practice, and they should bear this in mind if they are tempted to shut out older men who have at least proved themselves their equals.

The third objection calls for an answer similar to the first. It implies that the Council of the Institute will not or cannot do their duty in selection. To my mind, if there is anything in this at all, the whole house of cards collapses, without any help from the "inefficient Licentiates."

The fourth does perhaps call for a little sympathy. I suggest, however, that the R.I.B.A., having pledged its word to its members, is quite justified in asking them to release it from its word if such a course seems to be for the good of the profession. We are committed to a policy of registration, and we must surely wish that any register that is kept should be under the major control of the dominant architectural society. It was this principle that inspired the opening of the Licentiate class in the first place. It was the same principle that made it necessary for it to be reopened when the Society of Architects was amalgamated with the Institute. It is the same principle that calls for the present policy, because it must be evident to most of us that there are still a number of competent men outside our ranks, and who have attained the confidence of the public without recourse to examinations. It is for the good of the profession at large, rather than for the good of these individuals, that it is proposed to call them in to the ranks of the qualified. Finally, it must be remembered that those who are so much in love with the examination system stand to see this system re-established much more firmly out of a united profession than under the conditions we have hitherto suffered. In answering the fourth objection, the fifth has also its reply.

I suggest, therefore, that the R.I.B.A. Development proposals are a matter of long vision. There may be objections of the moment, but none more serious than we have suffered with no complaint for generations. If these proposals can be accepted by the rank and file, I believe we shall have seen one of the last steps in a movement which bids fair to set our profession in its rightful place in society.

POSITIVE.

# ARCHITECTURE OF THE FUTURE

THE series of popular lectures at the Architectural Association, Bedford-square, W.C.1, was concluded on Saturday last with one on "The Architecture of the Future," by Mr. Howard M. Robertson, F.R.I.B.A. Miss Heald presided.

The lecturer, whose address was illustrated by a great number of lantern slides, said the quest for air and sunlight, which was such a mark of the most modern architecture, was also characteristic of much that was most ancient. He illustrated this by showing how a block of flats in Paris was constructed on the principle of giving each flat its little terrace, to replace, in some degree, the garden, for which there was not space; and this he compared with another illustration showing a conjectural reproduction of the hanging gardens of Babylon. A block of flats built at Ostia 1,500 years ago was very much like the architecture we saw in the Riviera to-day. Other illustrations showed that side by side with the effort after sun and air was the effort to organise buildings. Formerly the tendency was for the rooms of a house to be arranged more or less helter-skelter; but now the architect tried to plan each unit of the house in an organised way. An illustration showed a modern mansion where the servants' quarters were built as one wing of the house, being thus almost completely separate and self-contained.

Showing slides of a house by Corbusier, the lecturer said that the French were producing houses with an orderly arrangement of the rooms, and where there was plenty of light and air. Such a house was to be regarded as "a machine to live in." The one shown was eminently functional, designed to satisfy all the requirements people most felt in everyday life. It was almost continuously surrounded by windows. This was made possible by designing the framework of the house inside and hanging the floors out on cantilevers. The windows were neither sashes nor casements, but all slid sideways. They could be pushed all up together, leaving practically the whole side of the house open. A series of terraces culminated in a roof garden. The first floor of the house was the main floor, and consisted of a large living chamber with recesses. The idea was that, especially in small houses, a better effect would be got by having one large hall rather than a number of little box-like compartments. Sunlight would come in on all sides, and people who wanted a measure of privacy would sit in one of the little nooks. The house had been very difficult to design. It was furnished chiefly with old materials, particularly Oriental rugs, but the mechanical type of house had bred a mechanical type of furniture. Steel furniture made in Paris was thought by some people to be the furniture of the future. There was also furniture made in America of laminated wood. A chair of this material needed to be scientifically designed if it was to resist the thrust of a person sitting down in it. Among other ideas illustrated by the slides was one for a porch in which to sleep in the open air, but which could be properly covered in if rain came on.

A house by Mr. R. A. Duncan, shown at last year's Ideal Home Exhibition, was quoted as suggesting the line development was likely to take. The house was to be produced on mass-production lines, and economy of space was important. The exterior was to be of a material not yet known, but better than brick or masonry. The house was constructed on the cantilever principle, and the walls were a light screen. The machinery put into the house was probably excessive.

Function now dominated design. To a large extent a church must be a place one could preach and sing in. A similar remark applied to a concert-hall. In Paris a concert-hall had been constructed entirely in the shape dictated by acoustics. The result was a form like that of the inside of a gramophone trumpet. In the case of the Horticultural Hall, which the lecturer and his partner designed at Westminster, the scheme had been dictated by the desire to get proper lighting for exhibition purposes and proper heating for shows of flowers.

City roofs in the future would probably be flat. Once the smoke nuisance was abolished they would be pleasant places of resort. The shops would be there, and people would stroll about, or perambulate in electric chairs, shopping and amusing themselves.

As to materials, the lecturer spoke of steel, glass, concrete and copper as being used now and likely to be used in the future. The tendency was to reduce masonry to a very small proportion. Buildings in America and Germany illustrated this point. It was possible to convey a structural feeling in any material. As to brick and masonry, it was rather absurd to hang such heavy materials on to a light steel framework, and it was only done because we were adapting the construction of hundreds of years ago as a skin for a modern steel building. He thought in future the structure would be encased in sheets of metal or of some composite material made in a factory, cut to size, and brought on to the job, where they would merely have to be hung on. Or the principle of the cement gun might be applied. In this case one would put up the framework, cover with lattice, and a man would come along with a gun and squirt on some kind of waterproof material. The factory of the future might have its exterior entirely of glass, wind bracing being used where necessary to keep such very light structure in position. It might be asked how such a building should be heated. But it was possible it might be built on a principle like that of the vacuum flask, with double walls and a vacuum between.

Coming to town planning, the lecturer said that in the good old days, three or four hundred years ago, things were architecturally in their proper place. The church stood in the middle of the town, dominating it, and nobody thought of building higher than the church. What was important municipally and ecclesiastically had importance in its architecture, but there came a time when the princes of commerce came on the scene, and nobody was going to stop making money because there was a church in the neighbourhood. Gradually the city developed into a kind of rivalry of buildings of all sorts, each trying to be taller than the others.

Slides then showed sky-scrapers in New York, Chicago, and elsewhere. In Chicago, the "Tribune" building and the Wrigley building formed a kind of gateway to Michigan-avenue; and at the present time half a dozen other such buildings were being erected to form a girdle around this point. It was an interesting treatment of these towers to try to make them fall into line as an architectural element. In all this modern effort to build big and build quickly, there was a struggle between the external design and the construction of the building. The Pennsylvania railroad terminus in New York was an example of a modern building that was admired for its classical beauty. But in that case utility had been sacrificed to architecture, and the railway station was not good in a functional sense.

A plan of a section of Paris as it is now, and another by Corbusier showing how it might be arranged, showed the confused maze of streets replaced by sky-scrapers with most of the ground left free. The tall buildings stood about in avenues and gardens. One suggestion for dealing with very tall buildings, whether in Paris or elsewhere, was that as they were built higher, so more ground should be given up at the foot. Another suggestion, which was actually being carried out both in Paris and New York, was that as the building went higher, so the upper stories must be placed further and further back.

The traffic problem had to be dealt with, and one suggestion for doing this was by means of a double-decker street. There was such a street along the water's edge in Chicago. Another was to be made in Paris connecting the Rue St. Honoré with the Rue de Courcelles. In such streets the lower level might be for slow, heavy traffic and the parking of motor-cars, and the upper street for cars and pedestrians. Another suggestion was to keep pedestrians and cars apart by means of elevated side-walks. One of the problems connected with double-decker streets was that of light and air for the street at the lower level.

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**Registration in Queensland.**

We are informed by the R.I.B.A. that an Act for the registration of architects has just been passed in the State of Queensland and a Registration Board will be established in the near future.

# ILLUSTRATIONS

## PLATES

**The Terraces, Kearsney Court, Dover.**

The photograph reproduced on our frontispiece shows part of the terraces in a small section of a large garden scheme, carried out by Messrs. Thomas H. Mawson & Sons for Mr. E. P. Barlow. The work, for the most part, was of a very precipitous nature. On the central axis below this point there is a large fan garden, which leads on to a formal canal which was made in a swampy wood.

**National Provincial Bank, Southport.**

The new premises for the National Provincial Bank at Southport as existing are part only of a building that is yet to be completed and will eventually extend for a greater length along Neville-street. The fronts are built of Portland stone upon a granite base. Carved motifs have been introduced over the ground floor windows to give symbolical expression of the bank's activities. Bronze entrance doors open into a vestibule, which serves both the bank and the suites of offices on the floors above. The woodwork and fittings in the bank office are all of Cuba mahogany, and the floor of the public space marble.

Messrs Finchett, Lancaster and Archer, of Hoghton-street, Southport, superintended the work during the course of erection.

The general contractors were:—Messrs. Duxfield Bros., Ltd., Southport, and the following were sub-contractors:—E. Deane and Beal, Ltd., heating; J. R. Pearson, Ltd., Birmingham, bronze doors, radiator grilles, gallery railing, electric light standards; Empire Stone Co., Ltd., staircase; Goodalls, Ltd., Manchester, fibrous plaster and curtains; John Stubbs and Sons, Liverpool, marble paving and wall lining; Edison Swan Electric Co., Ltd., electric light fittings; George Wragge, Ltd., London, and Jordan and Stirzaker, Wolverhampton, ironmongery; J. C. Edwards, Ltd., Ruabon, tile dadoes and paving; G. and A. Brown, Ltd., stone carving and wood carving; British Reinforced Concrete Engineering Co., Ltd., reinforced concrete (stanchions, beams, and floors); Smith, Major and Stevens, Ltd., Northampton, lifts; Brookes, Ltd., granite plinth; T. R. Highton, Southport, office fittings; Milner's Safe Co., Ltd., strong room door and fittings; The Bath and Portland Stone Firms, Bath, stonework.

The architects are Mr. F. C. R. Palmer, F.R.I.B.A., and Mr. W. F. C. Holden, F.R.I.B.A., architect and assistant architect to the bank respectively.

**Friends' College, The University, Chengtu, West China.**

The university is situated in the capital of Western China, and there are seven colleges with a Chinese and foreign staff, and Chinese men and women students. The present Friends' College buildings are built in the Chinese style, and these new buildings will harmonise with them. The scheme comprises a rectangular forecourt, with the entrance portico, a gate-house, garage, and garden pavilions. The latter open within upon their quadrangle, which is laid out like a Chinese garden surrounded by the College buildings raised upon broad terraces. The materials are all produced locally. The walls are built with the Chinese dove-grey hand-made brick, with carved work, dressings and pavings of a silver-grey limestone. The columns are "Persea Nan-muh," the wood of which the columns of the temples of Peking are built. They are lacquered in vermilion. The tiles are jade-green and glazed, and the finials are gilt.

Mr. Arnold Silcock, F.R.I.B.A., is the architect.

**Elementary School, Stanmore, Winchester.**

This school, which has been built to meet the needs of the new suburb of Stanmore, erected under the Housing Acts, provides 10 classrooms, together with assembly hall, staff rooms, cookery and handicraft centres, and clinic. Accommodation is provided for 460 children, and two additional classrooms are now being erected, which will bring the accommodation up to 540.

The building has been planned as three sides of a square, the open end facing south, so that the sunshine throughout the day floods this courtyard. The two wings are devoted to classrooms and the third side to the assembly hall, staff quarters, etc. The building has been placed on the site at such an angle to allow direct morning sunshine to each classroom, but so that it shall not shine on the faces of the children.

There are no corridors, access to all classrooms being obtained by a verandah. Every classroom is lighted for the whole of the length on each side facing south-east and north-west. These glass sides really consist of five doors with five lights above the transome, so that to suit the weather either side can be partly or completely thrown open, or both sides in summer weather. In severe weather one fanlight only may be opened as required, or, if a little more air is desired, it can be admitted through each of the upper parts of the doors, designed to fall inwards as hoppers. The wing containing assembly hall and staff quarters is the only portion which has any windows facing to the north. Beneath this wing advantage was taken of the natural fall of the ground to enable a useful chair store to be contrived beneath the floor of the hall, a really spacious heating chamber, and beneath the handicraft room very full storage for timber.

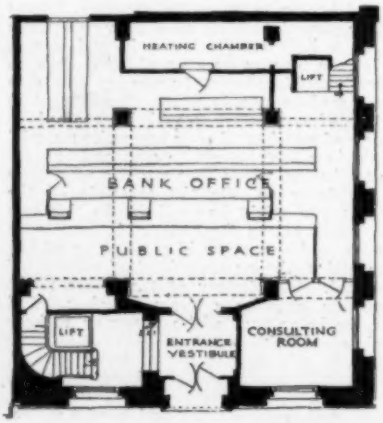
Plaster panels, illustrating incidents in local history, were kindly given by Messrs. W. H. Smith and Son, through the collaboration of their estate manager, Mr. F. C. Bayliss, F.R.I.B.A.

The construction is much of the usual type—brick walls, with red brick facings, and timber roofs covered with hand-made sand-faced tiles. A special feature of the building is the invisible panel-heating by panels in the ceilings, which has been carried out by Messrs. Jeffreys and Co., Ltd. The heating medium is low pressure hot water, generated in cast-iron sectional boilers, with reinforced circulation by means of an electrically-driven circulating pump.

The school has ample playing field space, the total area of the site being approximately four acres.

The general contractors were Messrs. H. J. Goodall and Son, of Basingstoke, the contract sum being £15,249. The cost of the heating was just over £1,700. The whole of the special window fittings for the classroom screens were supplied by Messrs. Carter and Aynsley, Ltd.

Messrs. Cancellor and Sawyer, F. and A.R.I.B.A., of Winchester, are the architects.




**National Provincial Bank, Southport: Ground Floor Plan.**

**R.I.B.A. Intermediate Examination: Testimonies of Study.**

The set of Testimonies of Study which we reproduce has been recently approved for the R.I.B.A. Intermediate Examination. The drawings are by Mr. Hubert Bennett, of the School of Architecture of the Manchester Municipal School of Art. The Board of Architectural Education wish it to be known that these drawings are published for the guidance of students, not as perfect solutions of the subjects, but to show the general standard of Testimonies of Study approved by the R.I.B.A.

# MEETINGS

Friday, *March* 1.

*The Architecture Club.* Annual General Meeting. At 34, Bedford-square, W.C.1. 7.30 p.m.

*Council for the Preservation of Rural England.* Dr. Vaughan Cornish on "The Enjoyment and Preservation of the Countryside." 8.30 p.m.

Monday, *March* 4.

*Royal Institute of British Architects.* Dr. Leonard Hill on "Modern Methods of Heating and Ventilation." 8 p.m.

*Surveyors' Institution.* Mr. F. Longstreth Thompson on "Recent Developments in Town Planning." 8 p.m.

*Bartlett School of Architecture.* Mr. F. E. Drury on "Approximate Calculations for Checking Reinforced Concrete Design." 6.30 p.m.

Tuesday, *March* 5.

*Timber Trade Technical Education Committee.* Mr. R. S. Pearson on "Forest Products Research and the Timber Trade." London Chamber of Commerce, Cannon-street, E.C.4.

Wednesday, *March* 6.

*Central School of Arts and Crafts.* Sir Banister Fletcher on "St. Paul's Cathedral." 6 p.m.

*Architectural Association.* Annual Reception by the President, Mr. W. H. Ansell. 8 p.m.

*Edinburgh Architectural Association.* Professor Wm. G. Newton on "Sicilian Days." 8 p.m.

Thursday, *March* 7.

*Chiswick Polytechnic.* Mr. W. H. Ansell on "Ironwork." 7.30 p.m.

*Bartlett School of Architecture.* Mr. S. A. Hill-Willis on "Concrete Roads." 6 p.m.

*West Yorkshire Society of Architects.* Mr. H. E. Simpson on "The Penalty of the Pencil." 7 p.m.

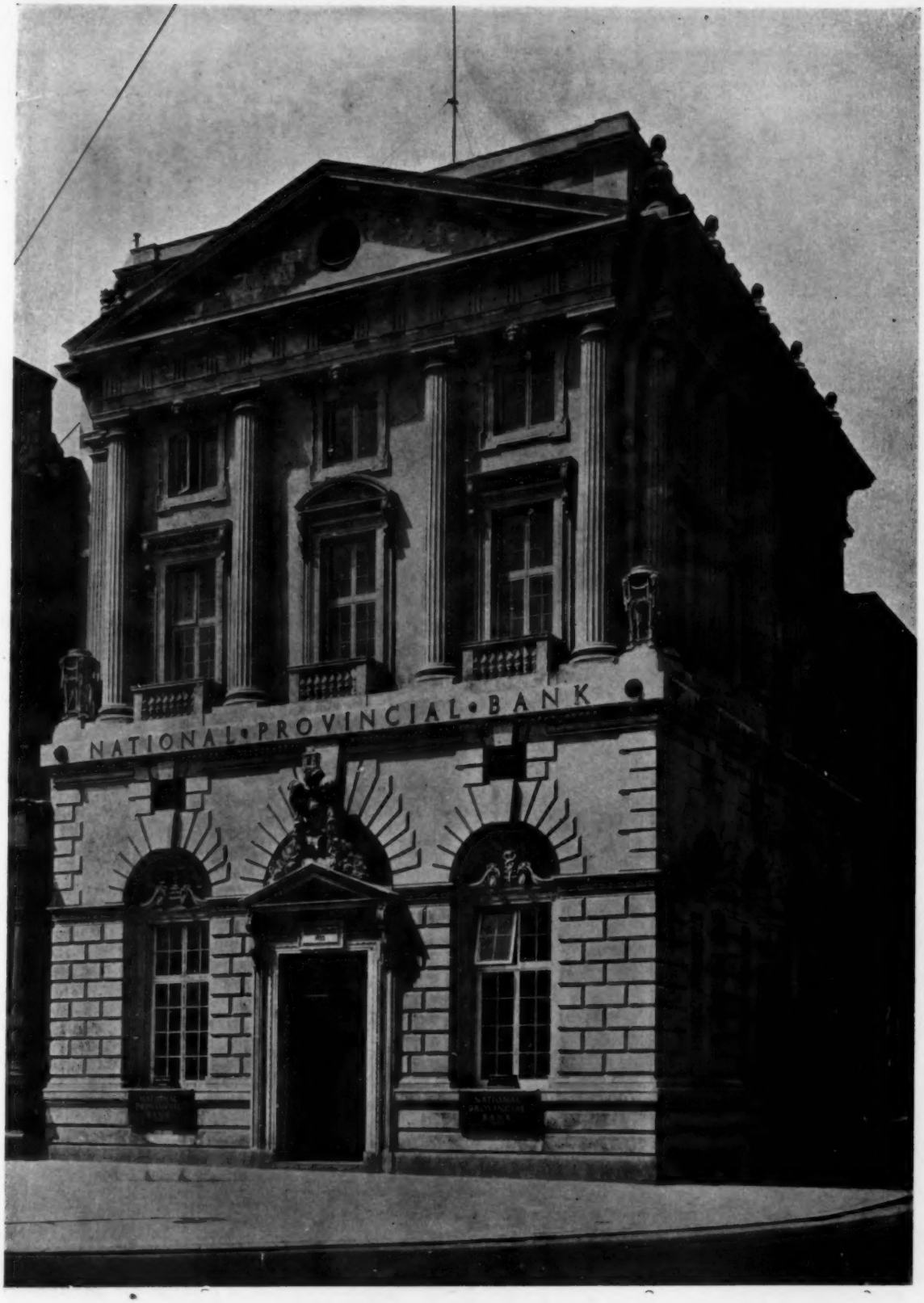
Friday, *March* 8.

*Glasgow Architectural Craftsmen's Society.* Visit to the Scottish Legal Insurance Building.

*Town Planning Institute.* Mr. Ashton Davies on "Railways in Relation to Town Planning." Caxton Hall, S.W.1. 6 p.m.

**JACOBEAN MANSIONS.**

Sir Banister Fletcher, F.S.A., F.R.I.B.A., in the third lecture of his series on "English Renaissance Architecture" at the Central School of Arts and Crafts, dealt with the famous mansions of the Jacobean period. He pointed out how in that most interesting transitional epoch of English architecture a more conscious attempt was made to systematise the classical element in the style in buildings as ordered conceptions, while the Gothic tradition remained in the mullioned windows and manor hall, with "screens" and dais. Sir Banister described, with the aid of representative slides, Hatfield House, Herts, "one of the most splendid examples of the style"; Aston Hall, Warwickshire; Holland House, Kensington; Blickling Hall, Norfolk; and other fine country seats. Mention was made also of the architects responsible for these mansions, including John Thorpe, Huntingdon, Smithson, and others.




**The National Provincial Bank, Southport.**

MESSRS. F. C. R. PALMER and W. F. C. HOLDEN, FF.R.I.B.A., Architect and Assistant Architect to the Bank respectively.

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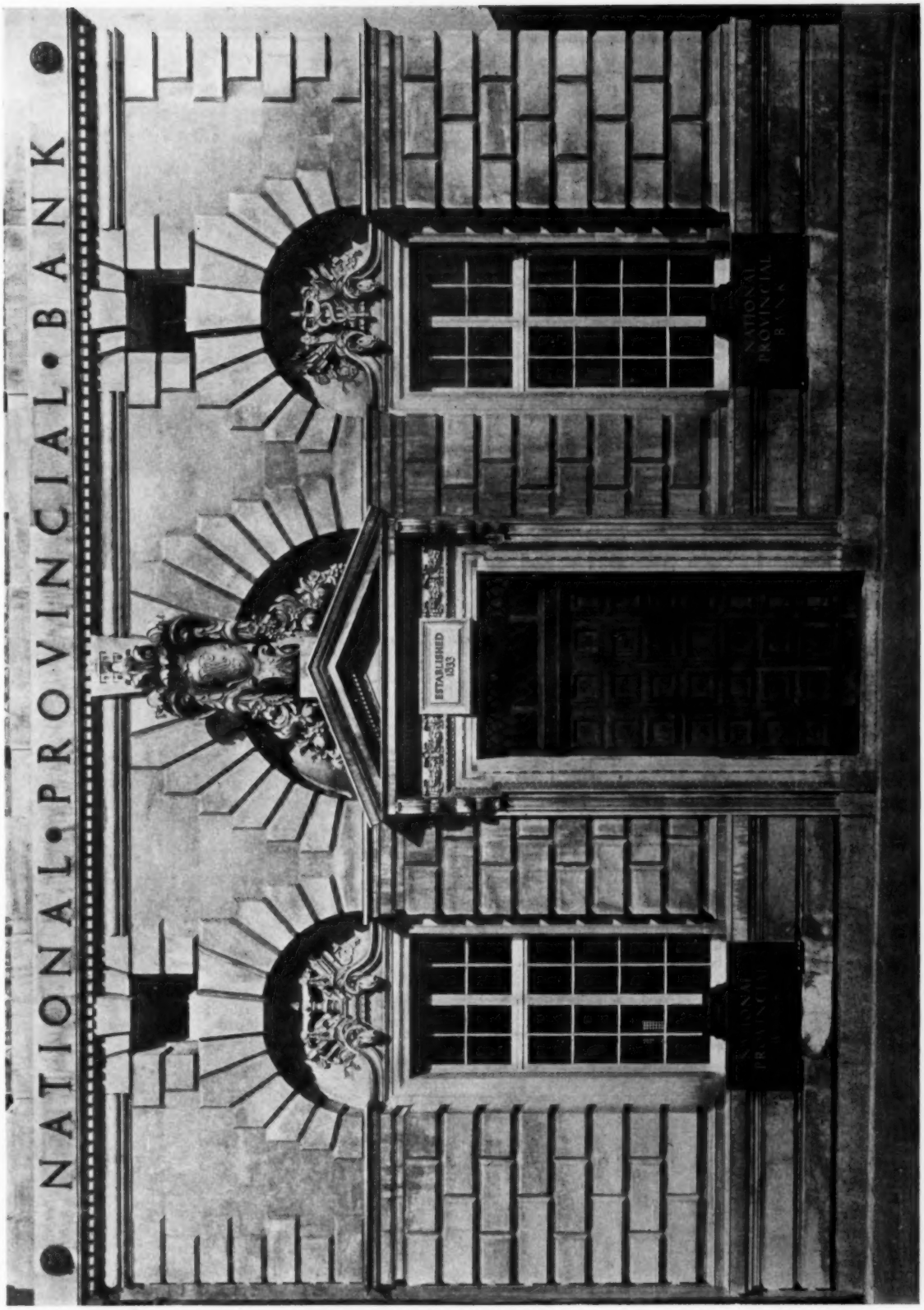


**The National Provincial Bank, Southport: Detail of Entrance Front.**

MESSRS. F. C. R. PALMER and W. F. C. HOLDEN, FF.R.I.B.A., Architect and Assistant Architect to the Bank respectively.

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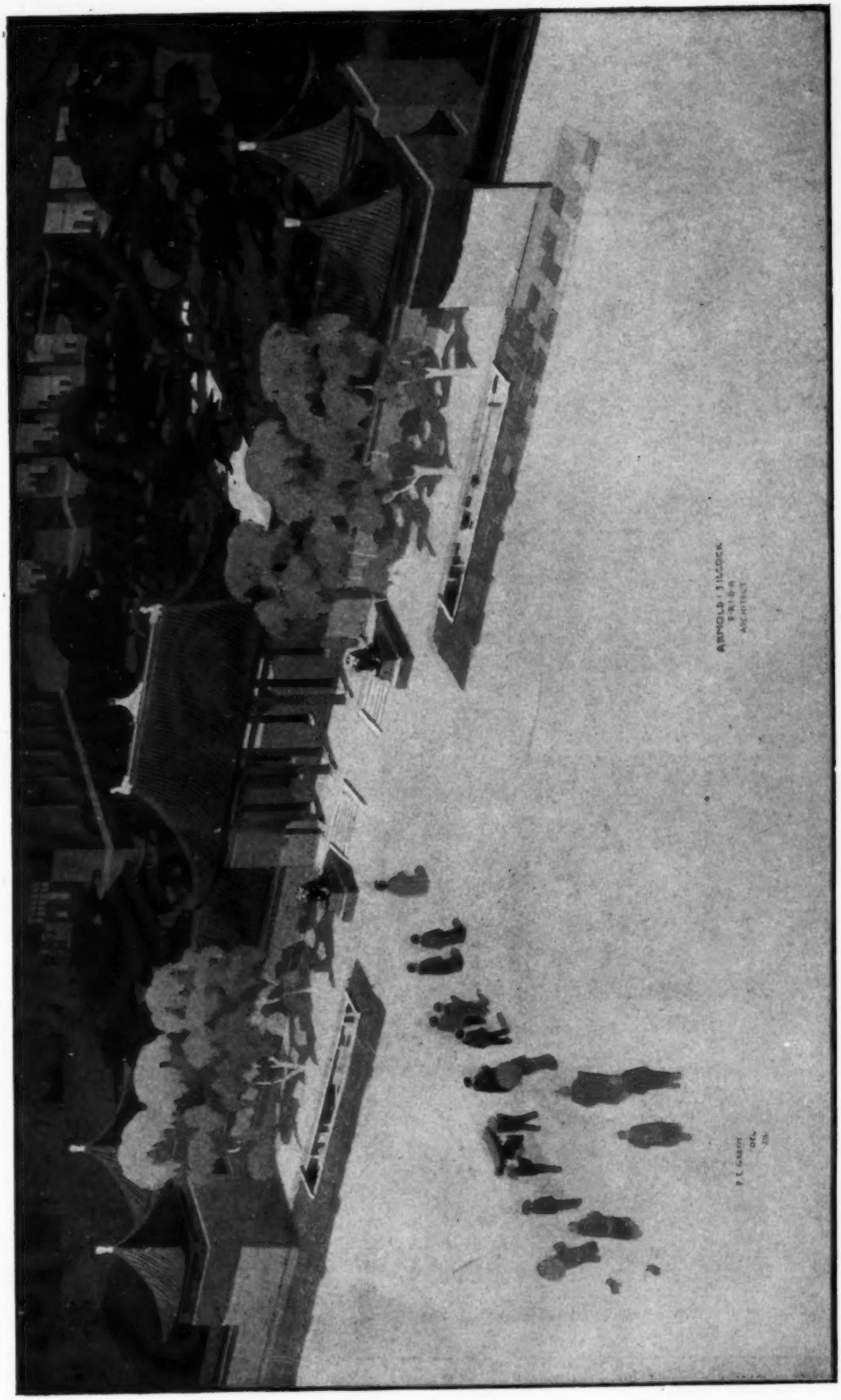

**Friends' College, Chengtu, West China : Main Entrance Gateway.**

MR. ARNOLD SILCOCK, F.R.I.B.A., Architect.

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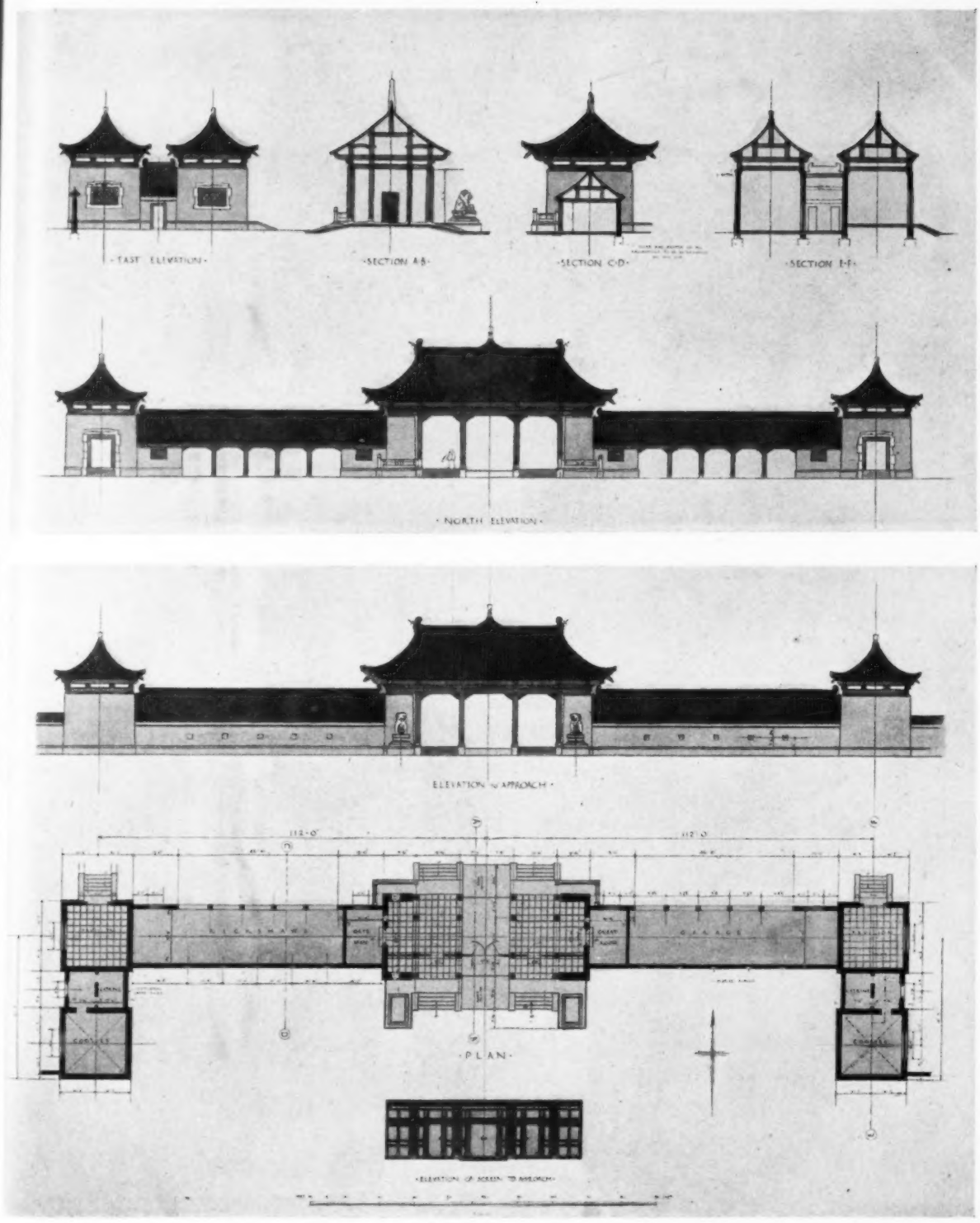


**Friends' College, Chengtu, West China: Main Entrance Gateway.**

Mr. Arnold Silcock, F.R.I.B.A., Architect.

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VIEW OF CLASSROOMS FROM SOUTH-EAST.

GENERAL VIEW.

MAIN FRONTAGE, FROM THE NORTH.

**New Public Elementary School, Stanmore, Winchester.**

MESSRS. CANCELLOR & SAWYER, F. & A.R.I.B.A., Architects.

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VIEW OF CLASSROOMS FROM THE WEST.

VIEW FROM SOUTH-WEST.

ASSEMBLY HALL.

**New Public Elementary School, Stanmore, Winchester.**

MESSRS. CANCELLOR & SAWYER, F. & A.R.I.B.A., Architects.

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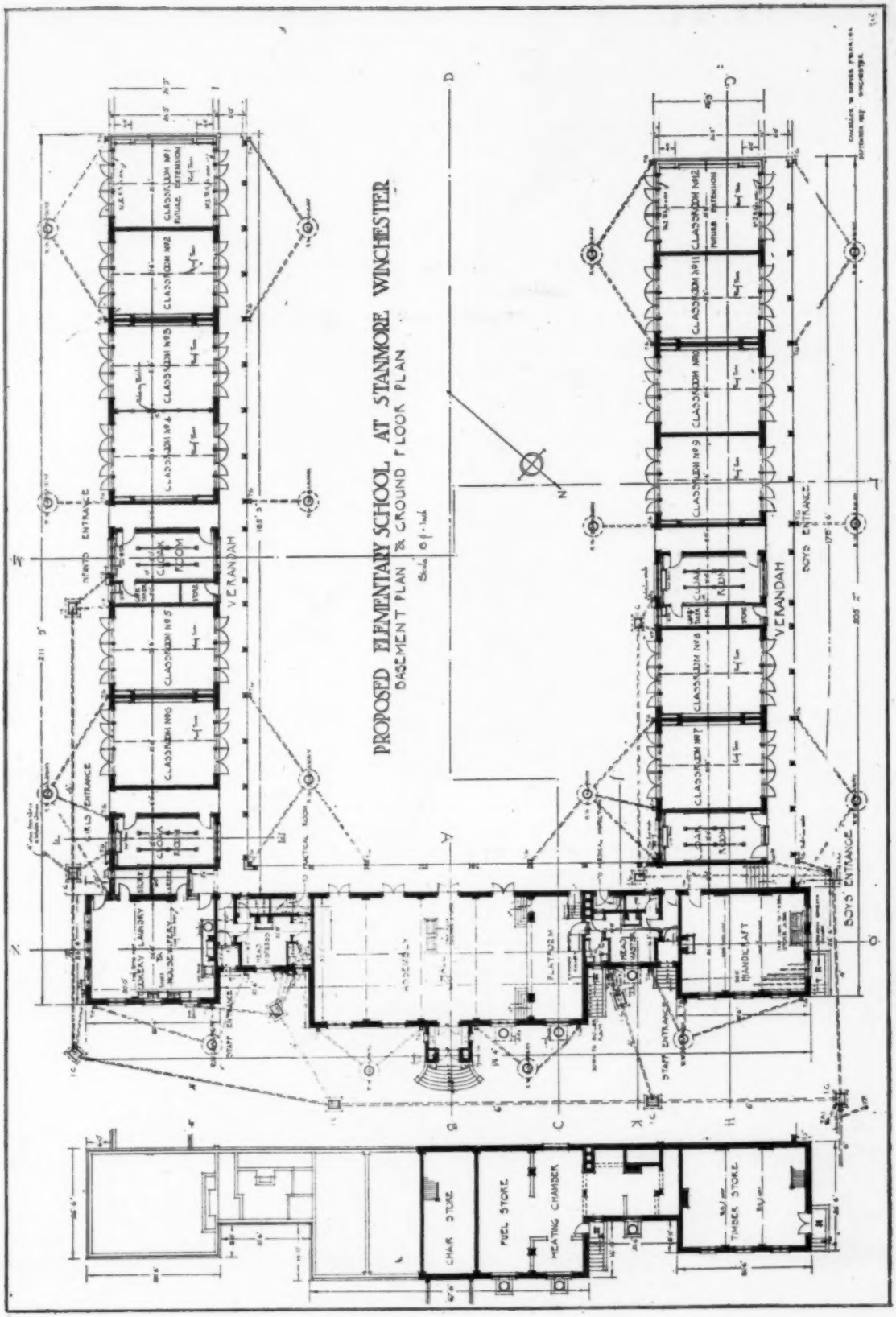


**New Public Elementary School, Stanmore, Winchester**

MESSRS. CANCELLOR & SAWYER, F. & A.R.I.B.A., Architects.

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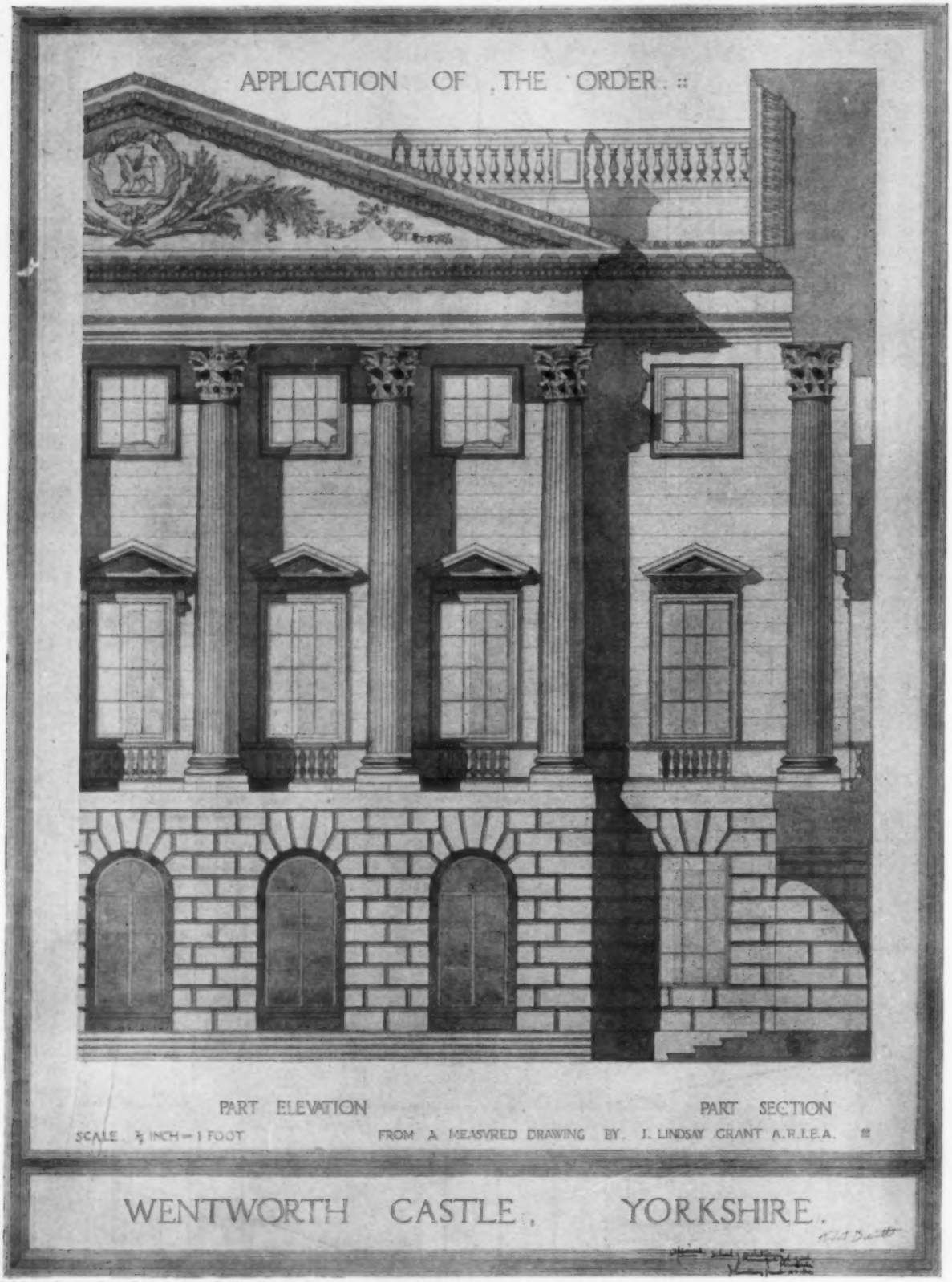
APPLICATION OF THE ORDER.
PART ELEVATION
PART SECTION
SCALE ½ INCH = 1 FOOT
FROM A MEASVRED DRAWING BY J. LINDSAY GRANT A.R.I.E.A.
WENTWORTH CASTLE, YORKSHIRE.

R.I.B.A. Intermediate Examination: Testimonies of Study.

By Mr. Hubert Bennett (School of Architecture, Manchester Municipal School of Art).

(Published by arrangement with the Board of Architectural Education.)

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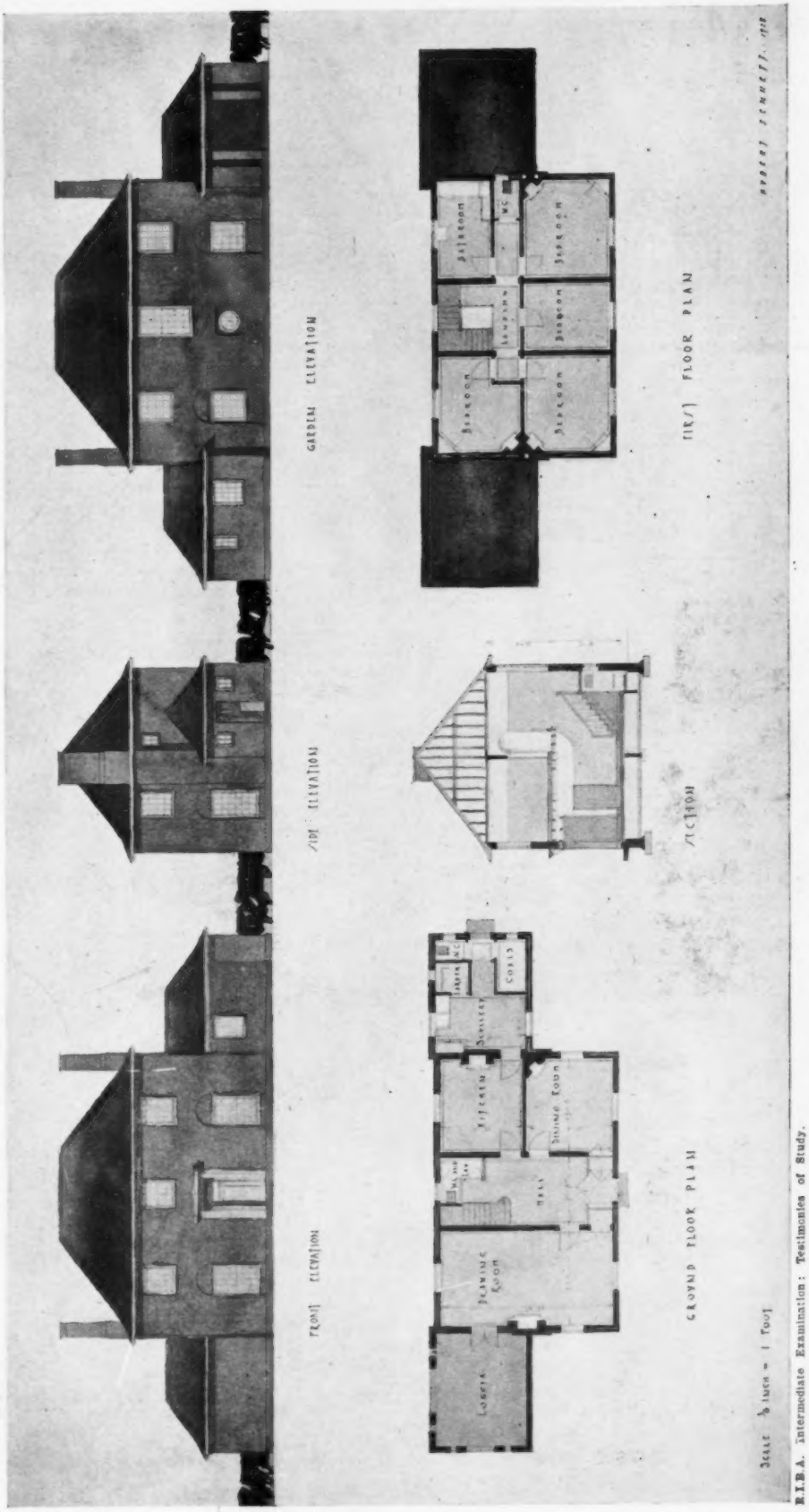
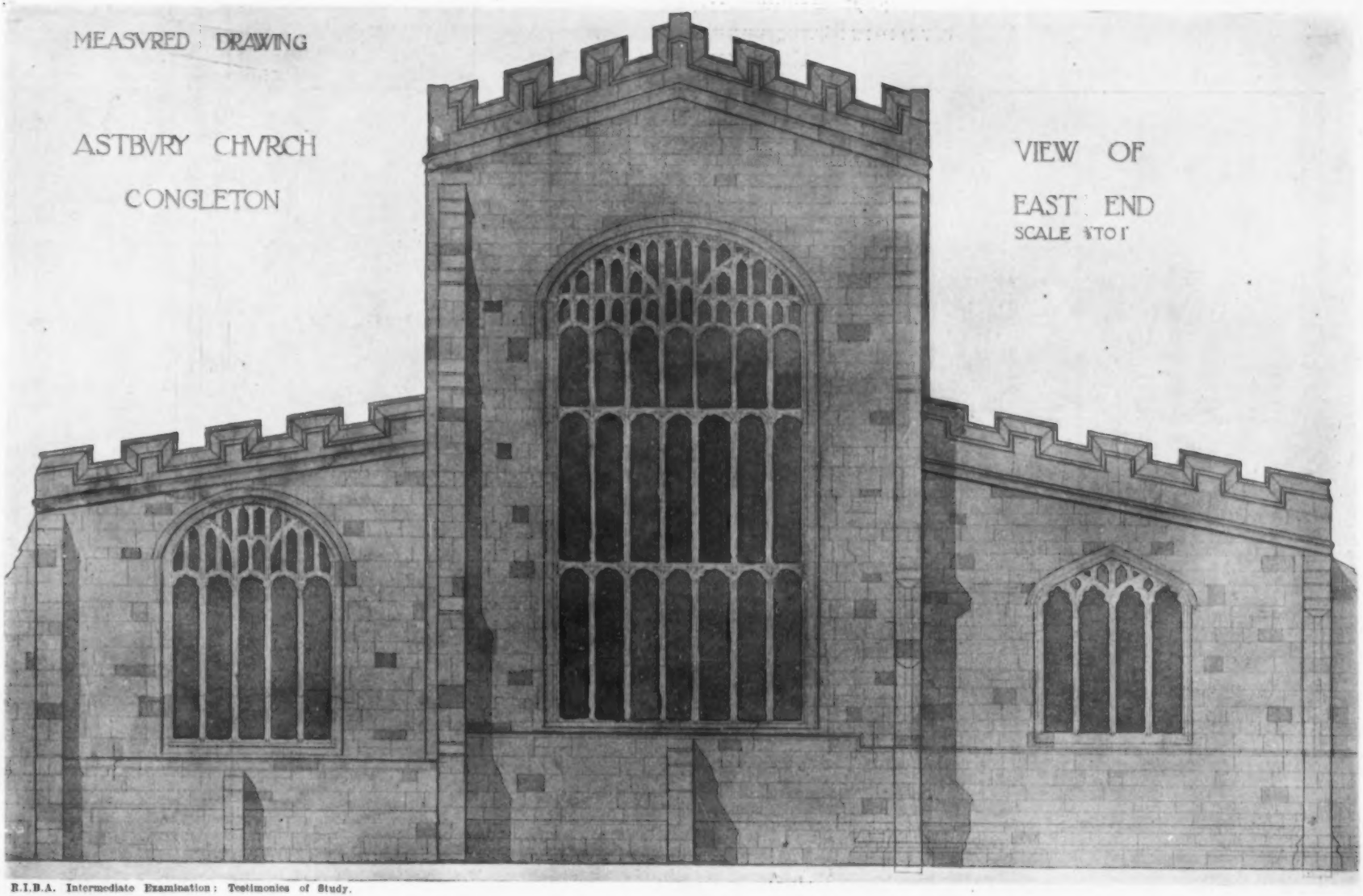



**Design for a Country House.**

By Mr. Hubert Bennett (School of Architecture, Manchester Municipal School of Art.)

(Published by arrangement with the Board of Architectural Education.)

R.I.B.A. Intermediate Examination: Testimonies of Study.

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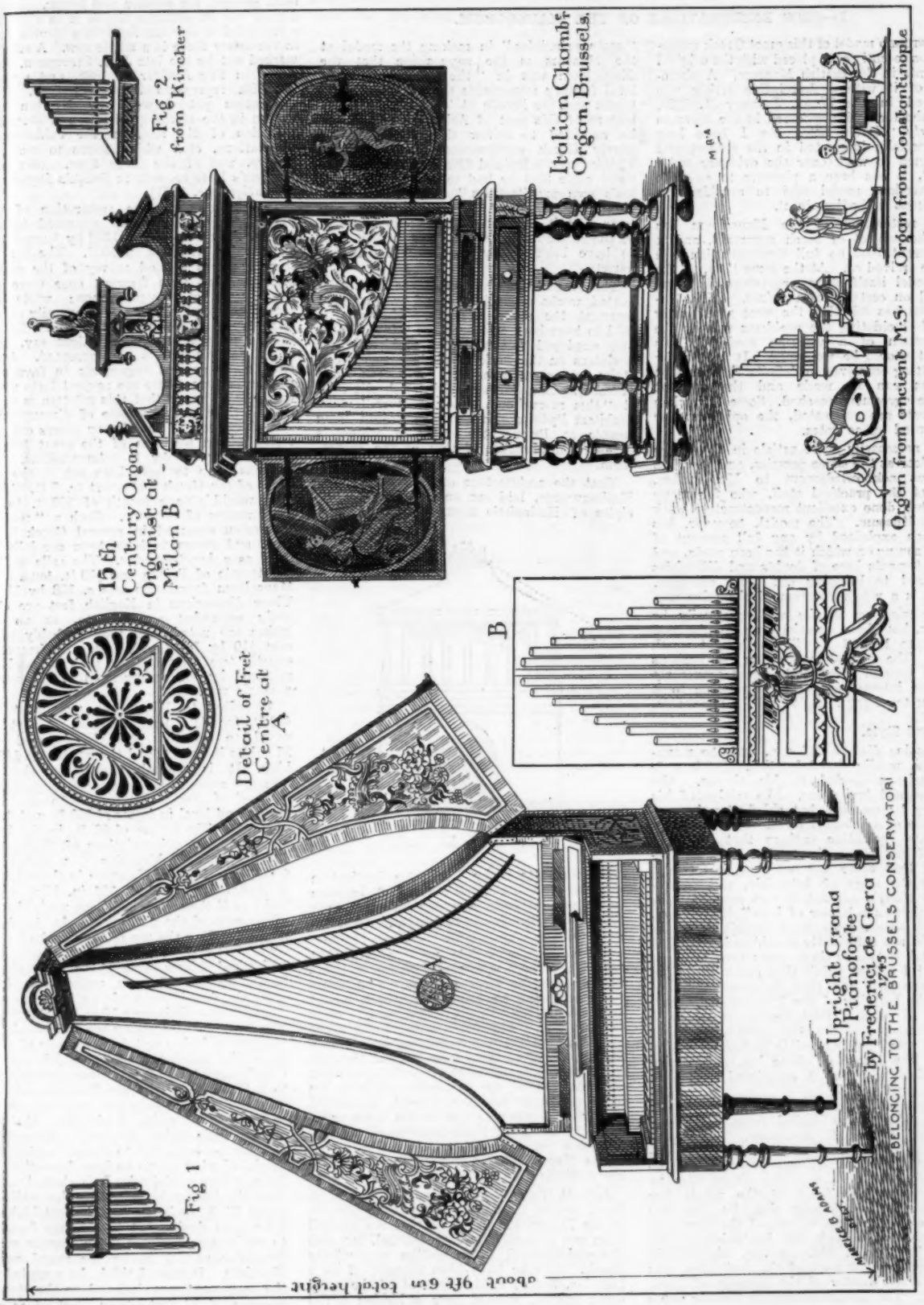


From Drawings by Mr. Maurice B. Adams, F.R.I.B.A. (Retired). (*See page 415.*)

By Mr. Hubert Bennett (School of Architecture, Manchester Municipal School of Art).
(Published by arrangement with the Board of Architectural Education.)

# MORE GREEK STUDIES

By W. R. LETHABY.

## I.—NEW RESTORATIONS OF THE MAUSOLEUM.

A restored model of this great Greek monument has recently been placed with the original fragments in the British Museum. A photograph of it with a descriptive article was published in the *Times*, January 31, 1927, and a shorter notice appeared in the Museum *Quarterly*, March, 1927. As I have long been specially interested in the subject and have tried to work over the evidence twice before*, it has been a pleasure to examine this excellent model and to consider the suggestions embodied in it.

The restoration of the Mausoleum has been the subject of much argument, and it is apparent that no full demonstration will ever be arrived at. At the same time, as the new model itself shows, agreement is being reached on certain main points. "The department has felt that the most satisfactory way of elucidating the problems was by the construction of a working model." This attempt should be welcomed. It is only by committing ourselves to definite theories that progress can be made and the greatest possible agreement reached. Some day, when arguments are exhausted, the opinions may be counted up as votes.

The necessarily short article in the *Times* is as clear as the space permits, and it makes generous acknowledgment to Mr. Pinker, chief of the practical staff, who for many years has done excellent reconstructive work in the Museum. The model, however, has not been explained by any full account of the reasoning on which it has been made, and the statements here of doubts and difficulties may lead to bringing out more evidence. Fig. 1 is a rough diagram of the scheme.

Discussion on details will necessarily be tedious, but if the questions can be advanced one stage I trust it will be thought worth while. The general reader may also perhaps gain a general idea of the great monument and the interesting questions relating to it without troubling to follow all the arguments.

### Date and Style.

Mausolus died in 353 B.C., and the monument is usually dated by this. "His wife Artemisia succeeded to his throne. She only reigned two years. She celebrated his memory by contests, but chiefly by the construction of a splendid tomb. It is stated by two late Byzantine authors that Mausolus himself had begun the tomb. It is also recorded that there was not time to finish it during the reign of Artemisia, and according to Pliny's account it was completed by the artists as a labour of love" (Catalogue). In such accounts the great magnitude of the work is not sufficiently considered. It must have taken two or three years even to begin it, and I cannot think that the whole could have occupied less time in accomplishment than the building of the Parthenon, or, say, 12 to 15 years. Furtwängler, many years ago, remarked of the Alexander sarcophagus that it was "not impossible that the Sidonian ruler, like Mausolus, chose his tomb during his reign, and had it completed under his own supervision."

Mausolus succeeded his father *c.* 377, and he transferred his capital from the inland town of Mylasa to the coast. "The symmetrical and convenient plan of the city described by Vitruvius was probably due to Mausolus." Now the Mausoleum was the city centre, the focus of the whole fine scheme, and it follows that its site was planned in the first lay-out of the new city. I would carry back the beginning of the work itself to *c.* 365. Scopas, who is said to have wrought some of the sculptures, was already the master of the Temple of Tegea in 392. The monument should thus be dated *c.* 365-350 B.C.

What is said to have been one of the "main principles" in making the model at the Museum is the supposition that the Mausoleum was in "the general style of local funeary monuments such as the Lycian tombs and the heroön at Trysa. The architecture of this part of Asia Minor must not be expected to follow the rigid rules of purely Greek construction; and even if Pythios was a trained Greek craftsman it is conceivable that he had to carry out Mausolus's own predilections." This doubtless is true to some extent as regards burial customs, but it is hard to believe in any way of the construction and sculpture which seem to have been purely Greek of the Ionian variety.

The Mausoleum was one of the most celebrated works of antiquity and was counted amongst the seven wonders. Mausolus is said to have been a lover of all things Greek, and employed famous Greek architects and sculptors on the work which has been called "the last great monument of Greek art" (Picard). The German critic Michaelis calls it "this marvellous Ionic structure." The architect Pythios also built the elegant Ionic temple at Priene, the order of which is almost a duplication of that of the Mausoleum.

That the architecture of the new city of Halicarnassus, laid out on the newest principles of Hellenistic town planning, should

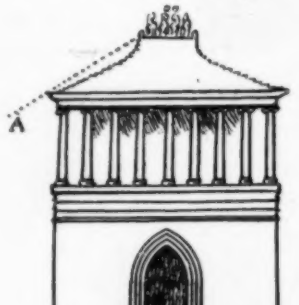


Fig. 1.

turn to remote rocky Lycia for inspiration is most improbable. It is seated between the Greek Miletus and Cnidus and only about 45 miles from Priene and 60 from Ephesus.

In the *Times* article we are told that "there are three ornamental tombs in Lycia which appear to form a series. The Trysa tomb supposed to have been built about 440 B.C. The Nereid Monument, *circa* 400 B.C. . . . The Mausoleum, built about 350 B.C., in which the architects went a step farther. . . ." I have long thought that the early date assigned to the Nereid monument was contrary to the evidence. It is to me more probable that the Nereid Monument and several other Lycian tombs were influenced by the great Mausoleum than that any imitation was the other way about. (See "The Nereid Monument Re-examined." in the *Hellenic Journal*, 1915.)

I doubt if the Nereid Monument should be dated earlier than 300. A probable account of the Mausoleum would be that the general form was to some extent traditional, but that the architectural interpretation was wholly Greek. It may have been thought of as a tumulus, but of marble instead of the usual earth mound, erected over a hidden burial chamber, and supporting a trophy. It was doubtless in the tradition of the pyramids, ziggurats, and "high places," in contact with the heavenly sphere.

### Dimensions.

The many restorations that have been attempted of the monument fall into two main groups, the smaller and larger. In the former the 36 columns which it is recorded surrounded it are arranged in a double line, in the latter there is a single row. A scheme worked out by the late J. J. Stevenson, published in *The Builder* in 1896, and revised in 1909, represents the small type. The restoration put forward by Newton and Pullan in the official publication of their exploration of the site, on the evidence of foundations, etc., which seems to me conclusive, was of the large type. (See also Newton's later account in Smith's *Dictionary of Antiquities*, 1891).

Two articles on the restoration of the Mausoleum have recently appeared in the *Bonner Jahrbuch*, one in 1922 by Kruger and another by Krischen in 1923. The first of these contains a good survey of the earlier attempts, but puts forward once more the small type of reconstruction; while the second accepts the now more generally agreed large type. The new Museum model follows this large type, which we might say, were it not for Kruger, is now accepted. Apart from many general arguments in favour of the larger type, there are several facts which to my mind prove that this solution is right. One of these is the scheme of dimensions.

A single row of 36 columns spaces out perfectly within the area of the great foundation, giving 10 by 8 columniations. The columns seem to have been set at the distance of ten Greek feet apart (*c.* 9 ft. 9¼ in.). This would give a length of 100 ft. to the flank ranges of columns. Such a "round" dimension occurred in several Greek buildings, and seems to have been specially desired as a *hecatompedon*. The cella wall of the temple of Priene was 100 ft. long. The Mausoleum foundation was *c.* 108 by 127 ft. These dimensions in English feet are obviously somewhat approximate, as no odd inches are noted, and they probably represent 110 by 130 Greek feet, a difference of exactly two columniations such as would be required by the arrangement of columns in a single row.

According to Pliny, the monument was 440 ft. (or 411 ft.) round about. A part supposed to be the peristyle (*pteron*) was 25 cubits in height, and the whole was 140 ft. high. It is generally agreed that the total measure around the monument, ccccxli. feet (instead of ccccxi. ft.) was distributed near the ground level in fronts of 100 ft. and flanks of 120 ft. The excess of 20 ft. in the flanks represents two columniations of 10 ft. The great statue of Mausolus was said to be 9 ft. 9½ in high by Newton; in the catalogue it is stated to be 9 ft. 10⅝ in. high, and it looks as if the statue had been made the unit of measure of the monument. In the details of the building the use of the standard of the Greek foot may be traced several times. Both sculptured friezes seem to be 3 Greek feet high. In the Museum restoration of the order the dentils are made up from one small fragment as a little over 12 in. apart. Pullan, whose figured dimensions are full of mistakes as between inches and decimal parts of a foot, gives the spacing as 9.85, which was obviously meant for .985, a near approximation to a Greek foot. In the Museum catalogue it is said that "there are so many mistakes in the decimal scales of his plates that they are of little value for exact dimensions." The change from feet to cubits in giving the height of what seems to have been the order has not been explained. It is clear, however, from the fragments that the order really was about 37 ft. or 38 ft. (Greek feet) high, and I have no doubt that the change from feet to cubits was made so as to express such a dimension as 37½ ft. by the round number 25 cubits. It may, I think, be accepted that the monument was designed on the standard measure of 10 feet. This ideal of working with simple, well-defined measures is found also in Egyptian buildings; the thought appears to have been to make perfect by eliminating accident and the unknown (*cf.*

* *Greek Buildings*, 1908, and *The Builder*, September 3, 1920.

an article by Mr. Dinsmoor in the *American Journal of Archæology*, 1908; and by Dr. Six, in *J. H. S.*, 1905).

**The Podium.**

The Museum model follows Krischen's restoration of 1923 in associating two sculptured friezes together at the top of the basement story or Podium. We shall return to this supposition later, but here it may be said that the arrangement seems unlikely constructively. The lower of the two, thus put directly one over the other, appears to have been about 16 in. thick, and the upper one 12 in. That a band of such thin stones, together nearly 5 ft. high, should run round a building with sides over 100 ft. long, and without any bond, is most improbable.

The tall, bare body of the Podium, rising from a plain three-course plinth, follows the same authority. This basement story in the model is occupied by a large hall giving access to tomb chambers, and itself entered and lighted through two great, acutely pointed archways (Fig. 1). "The evidence for this consists of two stones of blue marble. The first is a springer giving a radius to the arch of 10 ft. 5 in. On its outer sides is a raised joint to throw off water, proving it to have been an external feature. . . . The restoration is taken from the analogy of the tombs of Payava and Merahi which prove this form to have been in common use in Lycia. The second stone is a jamb of the outer ring." These two stones are now shown nearby the new model, labelled "Stones from the entrance arch of the Mausoleum." The evidence which they carry is so little that it is almost as difficult to prove the negative as it is to believe that they were what is suggested.

A moulding on the supposed jamb-stone seems to me much later than the style of the Mausoleum: it might be Roman. That such a jamb-stone under an arch set against the main structure should not bond into the main work by more than an inch or two is most improbable as construction; so, also, is the small scale. The construction proposed for the head of the archway—of putting one thin arched ring in front of another, leaving a vertical joint all round open to the weather—also seems impossible. The supposed "springer" stone does not spring from its end joint, but from a line 10 in. or 12 in. up. The curve of the suggested arch would thus have been of a "horse-shoe" form, which would not have been in continuation of the supposed jambs. The Lycian tombs which are mentioned had no *arches*; they were imitations of small wooden shrines or arks, and their curved stone *roofs* seem to have imitated thatching. The arched-shaped stone found on the site of the Mausoleum may have been part of the covering of such a tomb, or it may be the back of a curved seat. I had thought of these alternatives, and am told that Mr. Dinsmoor—a first-rate authority—has suggested that it was part of a seat. The scratchings of letters on it (NIKI, some nickname!) make the latter supposition the more likely. Also, such an *exedra* would be well in place in the enclosure of the splendid monument. Great open archways giving access to a hall from which burial chambers opened, the arrangement suggested by the model, must be without parallel. Tomb chambers and the access to them were hidden as much as possible. It is much more probable that an underground stairway excavated by Newton and Pullan was, as they thought, the way to the tomb chamber. This stair of twelve steps was cut in the rock 29 ft. (30 Greek feet) wide. It led to the base of the monument in which was a great block 4½ ft. by 4½ ft. and 7 ft. high, which was the closing stone of an entrance: beneath it was a fragment of a marble slab. "It may be inferred from the position of the remnant of marble pavement under the great stone that a passage paved with marble led from it to the royal sepulchral chamber, which may have been nearly in the centre of the basement. After the body had been carried down the steps, the great stone was let down like a portcullis. The alabaster vase found between the great stone and the foot of the staircase must have been deposited after the interment as an offering. There, too, were found bones from a sacrifice, and small terra-cotta figures. The staircase must then have been filled." Such was the considered opinion of Sir C. Newton, published so late as 1891 in Smith's *Dictionary of Antiquities*. These views of Newton are quite of a different nature from all subsequent theorising by others, for they were based on the total knowledge gained in excavating the site. Further, they were not his alone, but shared by Murdoch Smith and Pullan, who worked with him. In this same article Newton expressed the view that a podium 65 ft. high was excessive, "out of all proportion"; and that the lions were "arranged round the tomb as its watchful guardians."

*(To be concluded.)*

# SOCIETIES AND INSTITUTIONS

**North Staffordshire Association of Architects.**

Mr. Walter Tapper, A.R.A., P.R.I.B.A., was the guest of honour at the annual dinner of the North Staffordshire Association of Architects last week. The company included, besides Mr. Harold Goldstraw (president), the Lord Mayor, and Messrs. A. L. Cornes (president of the North Staffs Master Builders' and Allied Trades' Federation), A. Burton (city surveyor), Reginald T. Longden, J. Brittain Adams, George Bloore, F. Morral Maddox, E. T. Watkin, W. J. Venables, A. R. P. Piercy, J. R. Piggott and C. P. Edwards (joint secretaries of the North Staffordshire Architectural Society), T. Yoxall, W. F. Slater, Norman W. Slater, A. R. Scrivener, R. L. Jones, F. G. Yorath, S. Gibson, F. S. King, N. Weatherby, W. G. Cartlidge, John Burton, G. W. Ward, R. Reeve, J. A. Sillito, W. P. Boullemier, Alwyn P. Lovatt, A. Espley, P. B. Lawson, H. G. Pointon, P. B. Walker, P. Billington, R. W. Peat, G. F. Simms, C. H. B. Chantry and G. H. Barker.

The loyal toast having been honoured, the toast of "The Royal Institute of British Architects, the Allied Societies, and the North Staffordshire Architectural Association" was submitted by Mr. J. H. Barlow. It had been arranged for Mr. Andrew MacLaren, M.P., to submit the toast, but he was unable to attend owing to indisposition. In coupling with the toast the names of Mr. Walter Tapper and Mr. Harold Goldstraw, the speaker said they were trying to produce something pleasing to the eye, of use to the community, and a joy to everyone. So long as there were men with such an objective, so long would one be proud of the country to which one belonged.

Mr. Walter Tapper, responding to the toast, said, since Mr. Arnold Bennett came to town, he felt that they in London knew almost as much about the Five Towns—or rather six—as the Potteries knew about London. But he did not think they knew so much of what the Potteries were doing in architecture, even though two of Mr. Bennett's heroes were architects. In the company of Mr. Reginald T. Longden, who was a past-president of the North Staffordshire Architectural Association, he hoped to know more about the architecture of the district. A few weeks ago he had the pleasure of presiding over a little gathering of experts from all over the country who had met in London to consider a scheme which Mr. Longden had formulated with a view to achieving better design in dwellings. The object of the scheme was one which they all had at heart. At least he hoped they had. There was hardly anything to-day which gave so much pain and anxiety to architects as the desecration of that beautiful countryside of ours. They were appalled at the sight of the thousands of horrid, vulgar little houses and bungalows and even shacks which were spreading over the country, particularly along our roadsides. All these houses should be, and might be, positive added charms to the country. In the old days that was the case. They might not meet present-day needs as regards sanitation and so forth, but for the times in which they were built they were good, and healthy families were brought up in them. Instead of those beautiful cottages and houses we now had intrusions and impertinences, and the vulgarity of it all was lamentable. There was no reason why it should be. We could build cottages to-day just as well, and with that quiet fitness and beauty, as they ever did in times gone by. Further, such cottages could be economically built. The trouble was that the skill and the art of the architect had not been brought to bear upon the lay-out, the design, or the materials of these new houses. During his presidency he had advocated that in the schools and colleges of this country a study of the fine arts should become part of their general education. Architects—some of them, at least—did all they could, but a great deal more could be done if the commercial men in this country, if the captains of industry, the great merchant princes, and the great civic authorities inspired architects to do their best. He hoped the day would come when people, rich and poor, and no matter to which sphere they belonged, would realise that architecture was really a living thing and could spiritually uplift and help people to live a proper life. Architecture was really a vital factor in life. Mr. Longden had an ingenious scheme to bring the skill and art of the architect once more into play. A committee in London was now considering the details, and he had the firmest faith that excellent results would, in the end, come from the scheme.

Mr. Harold Goldstraw, president of the North Staffordshire Association of Architects, responding to the toast, said architecture was an asset to commerce, but it was difficult to convince a pottery manufacturer that the design of his facade could possibly increase his sales. It was surprising that the production of the finest pottery in the world was evolved in such inartistic surroundings. They were glad, however, that the manufacturer was gradually becoming alive to the advantage of displaying his wares at the British Industries Fair on properly designed stands. Building was an essential, not a luxury, art. It expressed the conditions of the moment more forcibly than either painting or sculpture. If the Association could make the man in the street take a live interest in the architecture of his city, the lectures that had been held by the Association would not have been in vain.

The toast of "The City of Stoke-on-Trent" was proposed by Mr. Reginald T. Longden, F.R.I.B.A. Urging the need for a good architectural library in Stoke-on-Trent, he declared that it would inevitably have its reflex on the vision of the public in the matter of the design and lay-out of houses and buildings generally. Architecture was a sound asset to commerce, and good architecture was cheaper than bad architecture. Where the architect had had a chance as regards street architecture in the Potteries he had put up buildings distinctly creditable to his profession. The profession and the city generally were indebted to Mr. A. Burton, the city surveyor, for his work in connection with the lay-out of the Trent Vale and Abbey Hulton housing estates. It was gratifying that in the Stoke-on-Trent Corporation Bill was a clause, known as the Bath clause, whereby the local authority had the right of censorship of the design of a proposed building.

The Lord Mayor (Ald. W. T. Leason), responding, said Stoke-on-Trent had not many buildings the architecture of which was outstanding, and the time had come when they

should concentrate on beautifying the city. They were fortunate in the design of some of their town halls, particularly the old Burslem Town Hall.

"Our Guests and Honorary Members" was submitted by Mr. F. Morrall Maddox, A.R.I.B.A., and responded to by Mr. Duncan A. Campbell, F.R.I.B.A. (president of the Liverpool Architectural Society), and Mr. A. L. Cornes.

### SOUTH WALES ARCHITECTS AND BUILDERS.

Under the joint auspices of the Cardiff Branch of the South Wales Institute of Architects and the South Wales Branch of the Institute of Builders, a lecture was given at the Engineers' Institute on February 14, by Mr. Clough Williams-Ellis, F.R.I.B.A. (Chairman, Council for the Preservation of Rural Wales), on "The Preservation of the Countryside—the Dragon *or* the Octopus." There was an excellent attendance, including members of the public, and the chair was taken by Mr T. Alwyn Lloyd, F.R.I.B.A. (Vice-President of the South Wales Institute of Architects).

Mr. Williams-Ellis illustrated his lecture by lantern views. One series showed the spoliation of country and town by bad and unsuitable buildings, by glaring advertisements, and other wayside monstrosities. In contrast with these examples of "the octopus," there were other illustrations of the reverse process; good, or at least appropriate, buildings, old and new; comely villages; tree preservation, controlled advertisements, and even attractive petrol stations. Views were shown of "Port Meirion," a new holiday village in beautiful surroundings on the North Wales coast, designed by Mr. Williams-Ellis. A strong appeal was made that those present and all others concerned about the damage which was being done in ruining the amenities of country and town should become associated with the C.P.R.W., and thus help in a positive way the arduous work of reclamation.

### SOUTH WALES INSTITUTE OF ARCHITECTS.

The annual general meeting of this Institute was held on Thursday, February 21, when the hon. treasurer's balance-sheet and report, which were adopted, showed that the branch was in a particularly healthy financial condition. The hon. secretary's report showed that a very useful year's work had been carried out. Attention was drawn to the great help which the branch had received from the Press in giving publicity to their various activities.

The following officers and members of the executive committee were elected :—

Chairman : Mr. H. N. Edwards.
Hon. Treasurer : Mr. H. Teather, F.R.I.B.A.
Hon. Secretary : Mr. W. S. Purchon, M.A., A.R.I.B.A.
Executive Committee : Mr. Percy Thomas, V.-P.R.I.B.A., Mr. F. H. Heaven, A.R.I.B.A., Mr. Ivor Jones, A.R.I.B.A., Mr. J. Williamson, A.R.I.B.A., Mr. T. Alwyn Lloyd, F.R.I.B.A.

Representatives of the Associates and Students : Miss O. E. Price and Mr. G. L. Price.

The following were elected as members of the Council of the South Wales Institute of Architects :—

Mr. H. N. Edwards, Mr. W. S. Purchon, M.A., A.R.I.B.A., Mr. J. Williamson, A.R.I.B.A., Mr. Percy Thomas, V.-P.R.I.B.A., Mr. F. H. Heaven, A.R.I.B.A., Mr. J. Llewellin Smith, L.R.I.B.A., Mr. Edgar Smith, Mr. A. G. Lynham, F.R.I.B.A., Mr. J. L. Rees, L.R.I.B.A., Mr. C. F. Jones, A.R.I.B.A., Mr. J. B. Fletcher, Mr. W. D. Thomas.

Representatives of Associates and Students : Mr. A. J. Hayes, Mr. J. R. Hallett, L.R.I.B.A., Mr. A. G. Fletcher, and Mr. C. H. Evans.

An interesting discussion on the activities of the branch followed, in the course of which it was decided to support the proposal to arrange for the holding in Cardiff of the C.P.R.E. "Save the Countryside" Exhibition, and to hold a series of informal discussions on matters of professional interest.

### WEST YORKSHIRE SOCIETY OF ARCHITECTS.

Students of the Leeds School of Architecture took part in a debate at the rooms of this Society recently, the subject for discussion being: "To be the compleat architect, it is necessary to engage in broader interests than those usually associated with the practice of architecture."

For the affirmative, Mr. E. Seel said that the student's imagination required continual and varied stimulus. The mind of him who studied only architecture would get into a rut. Architecture, in the highest sense of the word, must be an expression of life, since it was the art most intimately connected with life. Alternative intellectual occupation was needed to balance the effects of "one-way thinking." As to the direction of this outlet, that was purely personal, depending on one's inclinations. A typical suggestion was that of music; but this should mean more than an occasional visit to the opera. The less obvious possibility was an interest in social work, though this should be dissociated from the common object of "job getting." Complete change was better than complete rest.

Mr. J. Needham, speaking for the negative side, said it was contended that outside interests broadened one's mind and stirred the creative faculties; but, surely, the study of executed works did that. Sir Joshua Reynolds had said: "The habit of contemplating and brooding over the ideas of great geniuses, until you found yourself warmed by the contact, is the sure method of an artist-like mind." As for music, most people could, if they had any musical sense, get inspiration from it without going deeply into its technicalities. Beethoven might have derived inspiration from nature, but nobody supposed that he walked the fields with a magnifying glass, seeing how many calices a flower possessed, but would simply allow his mind to be acted upon by its general beauty.

Mr. G. B. Stickney said that the liberally educated architect, as outlined, would have no chance against the specialist, particularly in competition work; he would find himself second to him who earnestly pursued the study of architecture alone.

Mr. F. W. H. Allison referred to the medical specialist as a man who, in the main, confined himself to one subject. If broader interests were taken, he said, an architect obtained touch with likely clients, and so got his opportunity to be entrusted with commissions. He thought that any interests of an outside nature should be scientific, so as to encourage the inventive faculties.

Mr. G. L. Broadbent said he thought it was necessary to study all the arts connected with architecture; surely, that was a wide enough field. There were no doubt social interests which might be studied with advantage in order to broaden one's outlook on life.

On the question being put to the meeting, the majority of those present voted on the affirmative side. On the same evening there was on view a collection of photographs and drawings of executed work by Messrs. Chorley, Gribbon, and Foggitt, of Leeds.

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Under the auspices of this Society, at its headquarters, Leeds, on February 21, an exhibition was held of measured drawings and sketches of buildings abroad by students of the Leeds School of Architecture who had been successful in gaining the Society's travelling scholarships. The students were : Messrs. A. Johnson, F. Mudd, J. R. Tolson, Harold Whitaker, and F. Chippindale.

## THE R.I.B.A.

### Debate on Plumbing Practice.

A debate was held on Tuesday, February 19, at the R.I.B.A., on the subject of "Plumbing—reasonable modern practice and the improvement of by-laws to permit of it." The chairman of the meeting was Mr. Henry M. Fletcher, F.R.I.B.A., chairman of the Board of Architectural Education. Mr. T. P. Bennett, F.R.I.B.A., opened the debate on behalf of the architects, and Mr. W. H. M. Smeaton, F.R.San.I., R.P., Renter Warden of the Worshipful Company of Plumbers, replied on behalf of the plumbers. During the subsequent discussion the following spoke :—Dr. Charles Porter (Medical Officer of Health, Marylebone); Mr. A. N. Shelley (representing the Ministry of Health); Mr. F. A. W. Oliver (representing the Metropolitan Water Board); Mr. V. C. Hardy (Chief Engineer, Gordon Hotels, Ltd.); Mr. R. T. Manning (Borough Engineer, Chelsea); Mr. Stanley Hamp, F.R.I.B.A.; Mr. H. R. Hiscott; Mr. H. Blackman (Secretary, Institute of Plumbers).

The next debate will be held on Tuesday, March 19, at 5.30 p.m., when the subject will be "Metal Fittings of Buildings in Modern Practice."

### Lectures on Architectural Practice.

Following upon the lectures for practising architects which were given by Mr. W. E. Watson before Christmas, the Science Standing Committee have now arranged for two more lectures to be given on Thursday, March 14, and Thursday, March 21, at 6 p.m.

The subject chosen is "Insect Pests in Timber." Professor J. W. Munro, of the Imperial College of Science and Technology, the lecturer, will deal in his first lecture with insects affecting unworked timber, and in particular with the Lyctus beetles. Recently these beetles have become of real concern to architects and building contractors, who may quite innocently be involved in serious difficulty through lack of knowledge of the beetles and their habits. Professor Munro will therefore deal briefly with the important groups of beetles found in unconverted timber, with the types of damage they do, and their importance in structural work.

In his second lecture Professor Munro will deal with the furniture and death-watch beetles, which are more properly the enemies of timber *in situ* in buildings. Professor Munro will explain the present position with regard to remedial measures, and will point out that until some practical experimental work is done on a large scale it is possible to apply measures which are only palliative. He will deal briefly with these palliative measures and discuss lines of promising experiment.

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### British Engineering Standards Association.

Mr. E. E. Finch, Fellow of the Surveyors' Institution and Engineer to the Corporation of the City of London, has been appointed as Institution representative on a committee of the British Engineering Standards, which is to consider preparing a British Engineering Standards Specification for cast iron pipes for ventilation, heating, and house drainage.

### Future of Cast-iron Industry.

Mr. J. T. Goodwin, of the Cast-iron Research Association, speaking in Sheffield recently, referred to impending developments of an important character in relation to cast-iron. The Association, he said, was on the verge of putting before the country and the world generally most important facts with regard to the future development of cast-iron. A series of experiments had aroused the interest of all metallurgical scientists, and it was hoped that an announcement would be made which would show that they were in advance not only of the Continent but of the world.

# THE "COUNTRYSIDE" EXHIBITION

The Earl of Crawford and Balcarres presided at the R.I.B.A. on Monday last, when the Rt. Hon. J. Ramsay MacDonald opened a "Save the Countryside" Exhibition. Mr. MacDonald, in the course of his speech, said that if the beauties of England were to be outraged we should indeed lose a very precious inheritance. What we had to do was to use our influence with the Government, with County and local Councils, and, above all, perhaps with our schools and teachers. We had to create what might be called "effective watchfulness," so that there should be no robbers, no raiders, no desecrators. We had to see that powers in existence were used.

Speaking of unsightly advertisements, Mr. MacDonald said he felt that conferences with advertisers would bring improvement there. He wished public opinion were sufficiently well organised to make a note of the offensive advertisements and resolve never in the whole course of their lives to patronise the materials advertised until, at any rate, the evils of ugliness had been removed. The Automobile Association, he was certain, never put up bad signs with the idea that they would spoil anything, but now that they had had a camera pistol at their heads he was sure they would make amends.

Referring to houses that did not harmonise with surrounding beauties, the speaker made mention of bungalows and pseudo-palaces. Owing to the tremendous and urgent necessity for building, houses had been rushed up without due consideration of what their effect was going to be, except that they would provide accommodation for hundreds of thousands of people. He did not believe that was enough. No one could accuse him of being careless with regard to shelter; but he did think that when they were making up their minds to provide shelter nothing could justify the reckless way in which the countryside had been ruined by these operations. What happened was that in a good many cases a person chose a site and built a house which expressed himself and not the site. A man of worshipful mind would bring his home, not as an intruder into its setting, but as an invited friend.

The speaker pleaded for simplicity in design and for harmony. No man or woman who happened to own land in this country could establish upon that ownership a right to use the land in such a way that he or she would destroy the whole of the lands. Their liberty must be confined by the right of the people to have preserved for them the soul of the country as it had been expressed in the beauty of the scenery. Speaking on the problem of beauty as related to roads and the newer transport, Mr. MacDonald gave instances of necessary despoliation by the cutting of roads, and suggested that the planting of wild flowers by the sides of these roads would add to their beauty after a while. It was very necessary to inculcate in the young a love of beauty and a horror of ugliness which despoiled England's quiet beauty, for our scenery was genial and gentle, the scenery of culture, the scenery of quiet, of happy domesticity.

Mr. E. Guy Dawber, P.P.R.I.B.A., in proposing a vote of thanks to Mr. MacDonald, suggested that much beauty would be saved if architects were consulted more when building was contemplated. What would materially help in checking the flood of ill-designed cottages would be to use local materials. In Cumberland, a district of slate and stone, it was surely unnecessary to introduce red tiles, or to put on Cotswold cottages roofings of asbestos tiles! He had also wondered why it was necessary in Kentish housing schemes to use slates when Kent abounded in brick and tile works. Such things would bear looking into.

(*See also note on page 440.*)

# THE HOUSING PROBLEM

On Thursday, February 21, at Carpenters' Hall, Dr. Raymond Unwin delivered a lecture on "The Housing Problem and how it has been met." Housing as a special problem, he said, arose because progress of civilisation required more accommodation and equipment in dwelling-houses and greater amenity in their surroundings; and the provision of these increased the cost of dwelling more rapidly than the increase in the ability to pay rent took place among the poorer sections of the community. The community could not afford to allow these sections to lag behind, or fall below a certain minimum standard of living; hence the need to supplement in some way or other the ordinary working of economic impulse to the supply of dwellings for poorer sections of the community. This was the cause of the ordinary housing problem. The fact that house building of all kinds was practically stopped for five years on account of the War created an extraordinary problem of making up accumulative arrears thus created.

The title of the lecture must not be taken to imply that arrears of housing due to the War had been entirely wiped off, much less that the housing need had been met. Nevertheless, a great stride had been taken in that direction. Unfortunately, we were a country not very devoted to accurate statistics, and no precise figures were available as to the actual War shortage, or the need; but it was possible, on the basis of census returns and other figures, to arrive at some conception of the order of the need. Houses were like people in that they had a useful life and then gradually declined in condition and in value, and ordinarily perished, or were due to perish, of old age. It was usual to accept the average life of cottages built during the last century at from 80 to 100 years. If this was correct, the annual wastage of houses from old age was, or should be, in the neighbourhood of 40,000 dwellings per annum, as that represented approximately the number of new families having to be housed about 80 years ago. Houses were also demolished to make room for shops, industrial buildings, new streets, and other purposes. No separate figures were available for these. In addition to the wastage, houses had to be provided for rather more than 60,000 new families each year. It would be seen, therefore, that the total need was a rather rapidly accumulating figure, including the increased families, wastage from old age, and demolition. We had no exact figures of the number of houses built each year before the War. We did, however, know the net increase of houses charged for house duty year by year, and he found that for the ten years 1900 to 1909, inclusive, the increase in these houses was rather over 100,000 a year. There was then a considerable drop owing to the well-known slump in house building that occurred at that time; but even if the average be taken over the fifteen years 1900-1914, inclusive, the increase was 77,000 per annum. To this figure must, of course, be added the wastage of houses before the actual number of houses built could be ascertained. It seemed, therefore, not very far wrong in round figures to put the need in the neighbourhood of 100,000 houses per year. On that basis the accumulated need from 1915 to 1928, inclusive, would be 1,300,000 houses. The number of houses built since the War we knew, but not the number charged for house duty, so that we could not actually compare with pre-War figures. The number of houses built since the War was, in round figures, 1,240,000. The position was better than this would show. It was possible to check the shortage by the census figures. In the 1911 census there were about 250,000 more separate families than separate dwellings. At the date of the 1921 census there were, in round figures, 700,000 more separate families than separate dwellings, showing a shortage in 1921 of 700,000 on that basis, and a shortage of something like 500,000, to give the same number of dwellings, for every 100 families found in the 1911 census. It was not clear that the definitions of families and of dwellings adopted for the two census periods were exactly the same, or that they could be taken quite literally as defining the number of dwellings and families as ordinarily understood. Nevertheless, this was probably as reasonable a method as could be adopted to arrive at a conception of the kind of figures in which the deficiency at different periods would be expressed. On the basis of these figures he found that the War shortage, whatever it was, had been reduced by considerably over 300,000 houses, and that to restore the condition to the 1911 basis might need anything up to about 190,000 further dwellings, whereas the number required to give as many separate dwellings as there were separate families, on the census basis, would appear to be about 400,000 dwellings. The difficulties in the way of meeting this shortage, due to deficiency in men and materials, disorganising of the building industry due to the War, and high prices after the War, had been very great. He did not, however, wish to dwell on this statistical aspect of the case, but to refer mainly to the character of the great housing feat that had been accomplished by local authorities, and by private builders with very generous assistance from Government funds.

We had in this country a fine tradition of cottage building, and it was probably true that English people had a preference for cottage dwellings, and country life generally, more marked than found in many other countries. This tradition was sadly lost during the greater part of the nineteenth century, when the building of small houses was of a deplorable character, lacking in space, design or amenity. Certain of the arrangements in regard to building promoted a degree of overcrowding small dwellings upon the land, which was in no sense economical, and conferred no benefit either on the owners of land, the speculative builders of cottages, or the occupants. During the latter part of the nineteenth century, housing reformers had carried out experimental work in many directions and had proved that no necessity existed for the overcrowding of dwellings on the land, and this was so far demonstrated that after the War all were agreed that the rehousing should be carried out on the newer lines, and it was a fact that of the one and a quarter million houses built the vast majority were of the self-contained kind built at about 12 houses to the acre, every cottage having a garden, and all of them being spaced so as to get plenty of fresh air and sunlight. In London, of course, and one or two other large towns, a comparatively small number of dwellings had been erected in the form of flats or tenement dwellings, and in connection with the removal which must shortly take place of the increasing number of nineteenth-century cottages which were annually reaching the end of their useful life and ought to be replaced by more up-to-date dwellings, there was no doubt that some further development of flats for the central areas of towns would have to be adopted; but in regard to this it was to be hoped that the lessons learned with regard to the evil results of overcrowding, and the ease with which that overcrowding could be avoided, would be taken to heart in the development of the central areas, and that we should not repeat the foolish practices of the nineteenth century, which, for the sake of putting a few more families on a particular site, sacrificed the air space and sunlight and the amenities which made life worth living for the whole of the families housed on that estate.

America had, in a few of its towns, experimented in the congestion of population by the erecting of very high buildings, with the result that to-day their business was being impeded and the comfort of living in their towns destroyed by the congestion of traffic which followed. And we might see here again a confirmation of the general truth in regard to all housing matters—that nothing was really gained by overcrowding.

# THE CRAFT OF THE MASON

The second of a series of six lectures on the building crafts was delivered by Mr. W. H. Ansell, M.C., F.R.I.B.A. (President, Architectural Association), on Thursday, February 14, at the Polytechnic, Chiswick. After some introductory remarks, the lecturer said the earliest vaulting of all was the tunnel or barrel vault, a long single arch. That vault, so far as buildings were concerned, had certain disadvantages. First of all, being itself continuous, it required a continuous wall for support, and that was not a convenient method in building. Any opening in the wall had to be below the springing of the vault, otherwise difficulties would be encountered. Therefore, the barrel vault was the simplest form of vault, but it did not help much in the design of the building, because the abutment had to be continuous. In London was to be seen an example of a very early vault, and that was in the Chapel of St. John in the Tower of London. The stone tower had a barrel vault, but the difficulty in that case was overcome by an upper story being placed over the aisle, which took the thrust off the barrel vault and transmitted it to the outer walls. A great advance was made in vaulting when men discovered the principle of the groined vault, which consisted of two lengths of barrel vaulting intersecting at right angles, the "groins" being the sharp edges along the line of intersection. Groined vaulting in the Roman fashion was much used by the builders of the "Primitive Romanesque," out of which, at an early date, the Normans began to shape their own style. It was first applied to one square or oblong compartment (as at the "crossing" where the vaults of nave and transept intersect); but there were also the long stretches of nave and aisles to be roofed, and this was done by treating them as a series of such compartments put side by side. The Romanesque groined vault, then, was not at all easy to build. Besides this, it was dangerously weak along the groins. All the same, builders of the eleventh and twelfth centuries used it most skilfully, extending its use from crypts where the compartments were small and low to aisles where they were larger and higher, and then to the naves in their great height and span. Nor did they stop at vaulting rectangular compartments, for once they had mastered the art of groined vaulting they succeeded in applying it to more complicated and irregular shapes.

From thence we passed on to a new advance—from groined to rib vaulting. It was an epoch-making step, for all Gothic vaulting was rib vaulting, and but for the development of rib vaulting we should never have had Gothic architecture. The earliest rib vaulting known in England was to be found in the choir aisles of Durham Cathedral. In its simplest form, the rib was merely a diagonal arch built under the line of the groin. First of all the centering difficulty almost disappeared. The transverse and diagonal arches were built first, on ordinary arch-centering; this gave the skeleton of the vault, and the rest was simply a matter of filling in the space (called the "web") between rib and rib. The stone filling of these web spaces was not made flat on the back of the ribs; its surface was slightly curved, so that each course of stone became an arch thrown across from one rib to another.

No one ventured to build a ribbed vault so high in the air and over such a span until Durham Cathedral led the way. From that time onwards the great problem was how to deal with the thrust from this vault, collected at a point which got higher and higher above the aisle walls as the height of the church increased. The thrust was at first met by turning a quarter-circle arch against the point of pressure, and this arch was covered by the slope of the triforium roof. But as the nave rose higher, buttress arches or flying buttresses had to emerge above the roof, and a towering mass of masonry had to be raised to provide its springing and abutment. This vertical buttress sometimes being so high that it, in its turn, had to have its upper part strutted against the main wall by a second arch; and so we came to the "stone scaffolding" of flying buttresses such as we saw in Westminster Abbey, where, on the south side, the extra projections of the cloister made it necessary to have two ranges of buttresses connected by flying struts of stone in three tiers. The concentration of loads and thrusts on to certain points was accompanied by a gradual cutting away of those parts of the wall surface which were not taking the thrust, and could therefore be spared without weakening the building. So in time we came to the full Gothic church, which was really a stone skeleton of piers, ribs and buttresses, with all the spaces between left void or filled merely with a screen of coloured glass instead of a solid wall of stone.

An important change came about as soon as the ribbed vault had been developed. The simple system of vaulting each compartment with two diagonal ribs was elaborated until the whole sheaf of ribs branched out from every capital, each one meeting a rib from the other side. The large triangular web spaces, in consequence, became so small that the space between rib and rib could be bridged with a single flat stone, and so one of the last difficulties of building a vault was cleared away. The point where ribs met was usually emphasised by a stone "boss," often most elaborately carved, and builders began to take an interest in the pattern formed overhead by these bosses, and the ribs which joined them. So in later work the underside of the vault became covered with a regular network of stone, forming an intricate geometrical pattern. The pattern was helped out by little subsidiary ribs running from boss to boss, and not springing from the main shafts at all. Whereas originally every rib marked a change of surface (like the groin which it covered), many of them now became mere ornaments. Beautiful examples of this stone patterning could be seen at St. George's Chapel, Windsor; at Norwich, Ely, Sherborne, and elsewhere. It reached its climax in the delicate stone lacework of the fan vaulting at Christ's Church, Oxford; King's College Chapel at Cambridge; and—most glorious of all—Henry VII.'s Chapel in Westminster Abbey.

In the great fan of Henry VII's Chapel at Westminster the builder was enabled to break away entirely from the somewhat monotonous repetition of the fan vaults of Sherborne and King's College, Cambridge. This famous vault, the masterpiece of English masonry, was but the lierne vault of the Divinity School with certain modifications. First, it was executed in fans. Secondly, from the bottom of each of the two pendants in each transverse arch was built up a complete circular conoid. Thirdly, each transverse arch passed through the vault, and consequently its upper portion was invisible from below; so that from below the astonishing effect was produced of inverted conoids resting on pendants, which themselves rested on nothing but the unsubstantial air. Fourthly, the vault was purely a panel one; constructional ribs did not exist in it. And so, in the most amazing way, all in a moment the history of the English vault had been revolutionised. It began in the far-away eleventh century as a vault all web and no ribs. In the aisles of Durham diagonal ribs were added, at Lincoln more ribs still; ridge ribs and tiercerons. More and more the ribs multiplied; more and more close set the structure became, till a single flat panel was enough to bridge the ridge openings. Then, in Gloucester Cloister, even the panel disappeared; the vault became one solid mass of ribs. Finally, in the moment of its triumph the rib was struck down; and the vault became a thin shell of panels: the most consummate achievement of the masonry of the Middle Ages.

# THE POWERS OF THE ARCHITECT

By W. T. CRESWELL, Barrister-at-Law, Hon. A.R.I.B.A., Associate (late Fellow) Surveyors' Institution.

An architect is one whose profession or business is that of a general agent to the employer, on some or all occasions during the preparation and carrying out of a building enterprise. He is usually employed for the purpose of forming the contract between the employer and the contractor, preparing drawings and other contract documents, and superintending and certifying the works to conclusion.

**Contract of Agency.**

In all instances there exists a contract of agency between the employer and the architect. Such contracts may be expressly created by a writing, or implied by words, or by conduct or necessity; and, unfortunately, more often than not, they are created by words or conduct alone, and without anything in writing. The architect should remember that in many instances the Statute law requires that such contracts, to be binding, shall be in writing and by deed, and then it is necessary for the employer to give a power of attorney to authorise his architect to sign deeds for him. Contracts with corporations must (in most instances) be made under the seal of the corporation if they are to be binding. Further, the contract of agency may arise by ratification by the employer of the architect's acts done on his behalf.

**The Architect's Authority.**

As between the employer and the contractor, the employer is bound by all acts done by his architect, so long as these do not exceed the scope of the latter's authority; even to this extent, that if the architect commits fraud in matters within the scope of his authority, the employer is also liable for the fraud. The employer may, of course, ratify any act already done on his behalf by his architect; but if the architect commits fraud in matters *outside* the scope of his authority, he alone is liable, and the employer is free from blame in the matter.

The power of the architect, in most building contracts, is limited by the terms of the contract itself; but, in determining what is actually within the scope of his authority, the express nature of his employment, together with whatever may be considered by custom and usage to fall within his duties as an architect, must be fully weighed.

**Architect Must Use Care and Skill.**

An architect must exercise all his professional skill and knowledge in the employer's interests. He should remember that, at all times, his admissions, when made within the scope of his authority, can bind the employer. He should never make profit apart from his agreed or customary remuneration or commission from the employer; nor make any negotiations with nor take money "secretly" from the contractor for any consideration connected with or influencing the contract. If he does any of these things the employer is entitled to either (*a*) recover the secret profit, (*b*) withhold the entire remuneration of his architect, (*c*) repudiate the contract between himself and his architect.

That is to say, if an architect does *not* do his best for his employer, if he does not use his ordinary skill and care, he breaks whatever contract has been set up between himself and the employer; and he is liable to dismissal and forfeiture of the whole or part of his remuneration. That is, no person can recover for services not rendered according to his undertaking, or which he ought to have known would be useless or against the interests of his employer. Further, he may render himself liable in damages for (*a*) lack of care and skill, (*b*) for the return of any fees already paid to him (as having been paid upon a consideration which has wholly or in part failed), or (*c*) for negligence.

# BRITISH INDUSTRIES FAIR, BIRMINGHAM

THE Heavy Section of this Fair—which opened on February 18 at Birmingham—has been attended with a very considerable measure of success, as was to be expected in view of the large extensions to the Fair buildings and a large increase in the number of exhibitors. In our last issue we referred to some of the principal exhibits, and this week conclude with further notices. The Fair remains open until to-morrow.

**Robert Adams**, St. Ann's Chambers, 1 and 2, Orchard-street, Westminster, London, S.W.1; 3/5, Emerald-street, Holborn, W.C.1. Block 7J, Stand No. 3.

Here are displayed a number of door and casement specialities, including new patent improved types of the "Victor" door spring hinges; patent spring sash balances, dispensing with cords, weights and pulleys, for double-hung sashes; and patent "Victor X-it" panic bolts. Specimens are shown in brass, bronze and white metal and in various finishes, including B.M.A., silver oxidised, Florentine bronze, etc. Door handles, including brass grip handles, casement and door bolts, and general brassfoundry, and "Victor" patent reversible hopper cheeks, etc., are also shown.

**Bean Cars, Ltd.**, Rolfe-street, Smethwick. Block 15K, Stand No. 1.

A display is made here of drop forgings for the automobile, electrical, textile, general engineering and agricultural machinery trades. Those engaged in such trades should make a point of visiting this stand, where specimen forgings carried out by the more recent processes are displayed.

**Boulton and Paul, Ltd.**, Riverside Works, Norwich. Block 13E, Stand No. 3.

These exhibitors, who are manufacturers of "B.P." brand wire-netting—which is galvanised after weaving—have a comprehensive display of fencing and gates; "Boulton" water elevators for hand or power; self-oiling pumps, belt or electrically driven; centrifugal pumps, engine-driven; "Electrolite" lighting plants; and timber-frame buildings and joinery for home or export. A variety of examples of bungalows, pavilions, garages, horticultural buildings, etc., are also on view.

**Bowley, Preece and Co., Ltd.**, Hudson's Drive, Cotteridge, Birmingham. Block 7F. Stand No. 4.

On this stand are featured a selection of "Bowpre" wood mantelpieces and lavatory stands in fine figured oak, walnut and mahogany. Porcelain white-finish bathroom fitments, cabinets, mirrors, chairs, stools, backboards, etc., are also displayed. Special attention is drawn to a new range of bathroom fitments made in the new "Polychrome" ware, in a variety of colours and replicas of choice marbles.

**Braithwaite and Co. (Engineers), Ltd.**, Broadway-buildings, Westminster, London, S.W.1; **Steatite and Porcelain Products, Ltd.**, 56, Victoria-street, Westminster, London, S.W.1. Fairground, Block A, Stands Nos. 1 and 2.

Suspension and strain type insulators of the patent spring ring type, with mechanically fixed pins are shown here. There are also daily demonstrations of the suspension of a railway truck by a standard string from a steel transmission line tower, to show the great strength of the assembly and the absolute security provided for overhead transmission lines.

**Callender's Cable and Construction Co., Ltd.**, Hamilton House, Victoria-embankment, London, E.C. Fairground, Block A, Stand No. 4.

Demonstrations showing an entirely new method—the Callender Wilson Precision—of plumbing and cable jointing, which facilitates plumbing and renders it possible to plumb and sweat joints in fiery mines are given on this stand and will interest mining and other engineers.

**Cellactite and British Uralite, Ltd.**, Lincoln House, 296/302, High Holborn, London, W.C.1. Block 12C. Stands No. 2 and 3.

On these stands "Urastone" non-corrosible flue pipe and fittings are exhibited by the manufacturers, as are also "Asbestone" gas fire surrounds, which provide a satisfactory alternative to tiles. Other interesting features are "Cellactite" corrugated roofing sheets, which cannot corrode and do not break, and "Uralite," the fireproof sheeting.

**Enticknap Concrete Machines, Ltd.**, Broadstreet-place, E.C.2. Block 20F, Stand No. 3.

Builders will be interested in the machine shown here for the manufacture of breeze slabs or concrete blocks, 18 in. by 9 in., to any required depth up to and including 6 in., by combined hydraulic pressure and power tamping. A machine for the manufacture of concrete curbs, channels and mouldings, 36 in. by 10 in., to any required depth up to 8 in., should catch also the highway surveyor's interest.

**Ewart and Son, Ltd.**, 346, Euston-road, N.W.1. **Saunders and Connor (Barrhead), Ltd.**, Sanitas Works, Barrhead, N.B. Block 12H. Stand No. 1.

On this joint stand are shown Messrs. Ewart's instantaneous water-heaters, either gas- or oil-fired. A speciality is made of an automatic water-heater with service to bath, wash-hand basin and sink. Messrs. Saunders and Connor's exhibit comprise their "Agate" cast-iron white porcelain-enamelled sanitary fittings, while they show also their coloured porcelain bathroom suites in blue, pink, green, etc. Cast-iron lavatory basins and mirror backs in coloured porcelain enamel complete a display which should be visited by all interested in houses and the home.

**Expanded Metal Co., Ltd.**, West Hartlepool and Petty France, S.W.1. Block 9E. Stand No. 4.

An interesting treatment of metal articles to protect them from oxidation (scaling) at high temperatures, named "Servarising," is shown on this stand. The process is suitable for heat treatment appliances, oil engine parts, furnace fittings, oil burner nozzles, tools for roasting furnaces, preheater tubes, etc., and road surveyors, engineers and contractors will find it worth while to inspect the process.

**Joseph Freeman, Sons and Co., Ltd.**, "Cementone" Works, Garratt-lane, Wandsworth, S.W.18. Block 13B. Stand No. 1.

A variety of colours, hardeners and waterproofers for cement, etc.—under the brand-name of "Cementone"—are shown in this display. These products may be used in conjunction with cement, concrete, plaster, brick, stone, asbestos-cement, etc., both for incorporation and surface application.

**Gent and Co., Ltd.**, Leicester; 25, Victoria-street, S.W.1; and Newcastle-on-Tyne. Block 20K, Stand No. 2.

Architects of public and industrial buildings—as railway stations, municipal buildings, factories, cinemas, etc.—should inspect the "Tangent" specialities on this stand. They include:—"Pul-syn-etic" electric clocks and time discipline apparatus, electric bells and indicators, staff locaters, electric motor syrens and fire alarms, and "start and cease work" sound signals, power bells, water level indicating and recording apparatus, mining bells, relays, keys and telephones, and "Tangent" radiomatic wireless apparatus.

**Goodwin, Barsby and Co., Ltd.**, St. Margaret's Ironworks, Leicester. Block 19G, Stand No. 4.

This exhibit we commend to the particular notice of road-surveyors, borough-engineers, and all concerned with the mixing of concrete and tarmacadam. The stand shows:—A patent "Acme" portable stonebreaker, with revolving screening apparatus; concrete mixer, patent "Open Drum," fitted with hoist, batch loader, engine, etc., and convertible for end or side loading; concrete mixer, "Goodwin" patent "Open Drum," with direct coupling housed in engine, and steel frame fitted with four travelling wheels, but without loader; and a tarmacadam plant, patent "Jacta" loader or conveyor, portable, and with self-contained engine.

**Honeywill Bros., Ltd.**, 79, Mark-lane, E.C.3. Blocks 9G and 9H.

The products of the Canada Gypsum and Alabastine, Ltd., are displayed on this stand, and include: "Gyproc," a fireproof plaster wallboard—light, strong and permanently rigid. It can be panelled or invisibly jointed, and no preparation necessary before decoration; also "Rocboard," a fireproof plasterboard; double-thickness "Gyproc"; "Insulex" (wet and dry) fireproof heat insulating materials (which replace slag wool, granulated cork, etc.); "Dekoosto" acoustic plaster—a permanent mineral sound-absorbing finish for ceilings and walls—and others.

**Rd. Johnson, Clapham and Morris, Ltd.**, Jacem House, Trafford Park, Manchester. Block 15H, Stand No. 1.

Examples of goods of interest to the road-maker, contractor and electrician shown on this stand are:—High-conductivity copper-wire and strip; single and double cotton-covered wire and strip; braided copper-wire and strip; "Jacem" brand galvanised-wire netting and woven wire of all descriptions. For concrete work, steel-wire lattice and "Keedon" concrete reinforcement, and road and "Bricktor" reinforcement are shown. Machines in operation are those for braiding copper-wire and strip.

**R. A. Lister and Co., Ltd.**, Dursley, Glos. Block 17G, Stand No. 1.

The features of this stand are electric lighting and power plants for country house lighting, and for driving small machinery, such as pumps, saws, etc. The engines are water-cooled, automatically lubricated, vertical 4-stroke, and may be used for all power purposes. Pumping plants for country house and estate water supply will also interest the architect. A variety of auto-trucks are shown, of one-ton capacity, for transport work on railway platforms, docks, factories, warehouses, etc.

**Marshall, Sons and Company, Ltd.**, Britannia Ironworks, Gainsborough, Lincs. Block 17M, Stand No. 4.

Oil engines for all power purposes—as industrial, electric lighting, pumping, and concrete mixers—are featured on this stand. The display includes:—A "Marshall" 60 B.H.P. vertical oil engine, class "MV"; a "Marshall" 16 B.H.P. horizontal oil engine, two-stroke, type "8"; a "Marshall" new type 30 B.H.P. horizontal oil engine, four-stroke; and a "Marshall" new type 15 B.H.P. horizontal oil engine, four-stroke. A "Marshall-Benson" concrete mixer, with "Lister" petrol engine, Model 4-6, is also on view.

**R. and A. Main, Ltd.**, Gothic Iron Works, Falkirk, and Angel-road, Edmonton, N.18. Block 11E. Stand No. 1.

Here are displayed a variety of main gas cooking and heating appliances. Among them are some notable examples of recent design and manufacture, including the "Mainservor," the latest addition to the firm's list of enamelled cookers. The new "Baronial" series (with canopies and fenders of art metals and frames of cast iron) and the portable "Mainscreen" make interesting

additions to the already well-known gas fires which bear the trade-mark "Main."

**Morrison, Ingram and Co., Ltd.**, Cornbrook, Manchester; and **F. Winkle and Co., Ltd.**, Colonial Potteries, Stoke-on-Trent. Block 15D, Stand No. 2.

Builders and contractors will find on this stand sanitary fittings of various descriptions suitable for all classes of work, and an extensive variety of sanitary earthenware appliances of high quality in which borough architects and surveyors should be interested.

**Frederick Parker, Ltd.**, Viaduct Works, Leicester. Block 14F, Stand No. 3.

Contractors and road surveyors will find this stand and its exhibits of interest. Particularly so is the "Parker Portable" concrete mixer, a machine of 7 cub. ft. capacity and a 50-yard daily output. It is complete with a loading hopper, water-tank and engine. Also on view are: A "Parker" portable "Little Giant" mixer—5/3½ cub. ft. capacity, output 20-30 yards daily; 1½ B.H.P. "Lister" engine; a "Parker" hoist and engine, 10-cwt. size; a "Monarch" granulator, size 14 in. by 4 in., output 3 tons hourly to ¾ in.; a "Monarch" light stone-breaker, output 4 tons per hour; and a "Parker" single-wheel type barrow.

**Ransomes and Rapier, Ltd.**, Waterside Works, Ipswich. Block 7L. Stand No. 3.

Here is shown the Ransome "Featherweight" concrete mixer. This has a capacity of 4½-3½ cubic feet, and is fitted with a 1½-h.p. "Petter" petrol engine, mounted on road wheels, forming a complete plant. A further exhibit is a Ransome "Lightweight" concrete mixer, of a capacity of 7-5 cubic feet, with a 3-h.p. petrol engine, elevator and road wheels. We learn that both plants are of British Standard Specification material and guaranteed for one year.

**Ruberoid Co., Ltd.**, Lincoln House, High Holborn, W.C.1. Block 10E. Stand No. 6.

This stand displays to advantage flexible bitumen roofings of high quality for every type of roof and building. "Ruberoid" is suitable for use in any climate, either as roofing for railway coaches; covering for ships' decks; bitumen dampcourses—woven base, fibre base, and lead lined; insulating paper, paints and tape; expansion jointing for concrete road work.

**Ruston and Hornsby, Ltd.**, Sheaf Iron Works, Lincoln. Block 15J, Stand No. 1

A display is made here of the "Ruston" cold-starting oil engines of the horizontal and vertical types. These, we learn, run on the cheapest fuel oils and are extremely simple in operation—stand-by losses being entirely eliminated. Also on view is "Ruston No. 4" excavator, fitted with back-acting trenching equipment and with a bucket capacity of half cubic yard. It has a petrol-electric or oil-electric drive, and is convertible to shovel, dragline, skimmer scoop or grab crane. Engineers and surveyors should pay a visit to this stand.

**The Silicate Paint Co., Ltd.**, Charlton, S.E.7. Block 13A. Stand No. 4.

Decorators as well as architects will find much of interest in the display given here. "Duresco," the water paint, is demonstrated, as well as a variety of products as "Petrifying Liquid," hard-gloss and silicate paints, varnishes, polishes, stains, enamels, japans, anti-corrosive paints, and all decorators' materials.

**Sturtevant Engineering Co., Ltd.**, 147, Queen Victoria-street, E.C.4. Block 13D, Stand No. 2.

Those engaged in the planning of cinemas, theatres, restaurants, and large office blocks will find a visit to this stand profitable. There are on view turbine vacuum-cleaning plants as follows:—No. 10 Stationary Installation, comprising Turbo-exhauster driven by 10-h.p. direct-coupled motor—complete with dust separator; a No. 6 Portable Turbine cleaner for tramcars and motor-buses; and No. 5 and No. 4 Portable Turbine cleaners, for business and industrial use. For the household will be found of use the "Croydon" type vacuum cleaners. Also to be seen are cleaning tools and accessories, Sturtevant pneumatic despatch tubes (for conveying messages, cash, small parts), and also various types of carriers, fans and air filters.

**Tangyes, Ltd.**, Cornwall Works, Birmingham. Block 16J.

Engineers especially should pay a visit to this stand, whose exhibits include:—One 144 B.H.P. twin-cylinder heavy fuel oil engine, cold starting; one 19 B.H.P. fuel oil engine, cold starting, for electric lighting purposes; one 6 B.H.P. fuel oil engine, lamp starting, driving a treble-ram pump; three centrifugal pumps; two treble-ram pumps; lifting jacks, pulley blocks, malleable castings, and leathers.

**The Waterex Co., Ltd., and Watco, Ltd.**, 104, High Holborn, W.C.1. Block 19M, Stand No. 4.

Waterproofers and preservatives for concrete and wood and concrete will interest those faced with problems provided by damp and free water. Waterex Co., Ltd., are showing "Waterex" waterproofing for brick, stone and concrete surfaces for use above and below ground against rain and water pressure. Practical demonstrations showing its efficacy and proving that it is colourless in action are given daily. Watco, Ltd., are demonstrating preservatives for wood and concrete Demonstrations are given showing the wear-resisting action of "Watco" as applied to wood and concrete floors.

**Well Fire Foundry Co., Ltd.**, 15, Berners-street, W.1. Block 7C. Stand No. 6.

A number of examples of fireplaces are shown on this attractive stand. Including many of new design and of new materials, the fireplaces are constructed on the "Well Fire" principle. Some are being shown for the first time, and architects and others who are concerned with the development of estates, private houses, etc., will find this stand of interest.

**Winget (1924), Ltd.**, 24, Grosvenor-gardens, Westminster, London, S.W.1. Block 14G. Stand No. 2.

Various types of their wide range of concrete mixers are shown by this firm, including some of the fastest and most efficient machines of their kind. The latest types of stone breakers and granulators and block and slab-making machines, both for hand-power and mechanical pressure, are also exhibited.

**Young, Osmond and Young, Ltd.**, 47, Victoria-street, London, S.W.1. Block 18H. Stand No. 8.

A description of this firm's "Unity" tubular electric heating system was given in our review of the Edinburgh Exhibition in our last issue. It may suffice to say that at the British Industries Fair the firm show a complete range of their apparatus for the economical heating of offices, factories, cinemas, halls, churches, schools, private houses, etc., together with electrically-heated towel rails, car heaters, window heaters, four-bar radiators and linen cupboard heaters.

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**"Cement and Cement Manufacture."**

Hitherto issued as a supplement to "Concrete and Constructional Engineering," this publication is now produced as a separate journal, the first number of which is before us. In contains a number of illustrated articles by technical experts, including "Dry and Wet Processes in Portland Cement Manufacture," "A Modern Portland Cement Factory," "The 'False Setting Time' of Cement," "Electric Driving of Cement Works," "New Dutch Specification for Portland Cement." "Raw Materials of Portland Cement Manufacture," as well as notes and news of general interest to the industry.

## INCORPORATED INSTITUTE OF BRITISH DECORATORS

One of the principal objects of the "Education Fund" of this Institute is the endowment of the Lectureship in Decoration at London University. This step should have beneficial effects in improving the status of decorators in general and of the trade as a whole by the provision of a field of study which at present is outside the scope of university teaching. We understand that the Council of the Institute has had satisfactory negotiations with several of the principal universities, and the endowment of a Lectureship in Decoration at London University is an accomplished fact, several students having been already enrolled for this year's course. A three-year course in decoration has been established, leading to the grant of a certificate by the university, and students can, if they wish, take the B.A. (Architecture) degree. Decoration is specially included in the training for this degree.

It is hoped subsequently to extend the scheme to Cambridge, Liverpool, and other universities, and the Council feels that it should be encouraged by subscriptions, not only from decorators, but that the raising of the necessary funds should be undertaken in a co-operative manner. It is hoped that manufacturers of all articles coming within the meaning or scope of decoration in its widest sense (*e.g.*, paints, varnishes, furniture, carpets, hangings, etc.) will be interested and willing to help the Institute in this work.

Following is the first list of subscribers:—

| | £ | s. | d. |
|---|---|---|---|
| Institute Fund in hand and contributions from Members of the Institute | 776 | 10 | 6 |
| Beaverhall Colour Co., Ltd. | 1 | 1 | 0 |
| A. Bell & Co., Ltd. | 3 | 3 | 0 |
| M. H. Birge & Sons, Ltd., Berners Street | 2 | 2 | 0 |
| B. Colley & Sons, Ltd. (per D. J. Overy) | 5 | 5 | 0 |
| J. B. Davidson | 10 | 10 | 0 |
| "The Decorator" (per J. G. E. Holloway, B.A.) | 10 | 10 | 0 |
| Arthur H. Lee & Sons, Ltd. (first donation) | 25 | 0 | 0 |
| Leyland Paint & Varnish Co. (per annum) | 25 | 0 | 0 |
| John Line & Sons, Ltd. (first donation. further annual sum to be decided each year | 50 | 0 | 0 |
| Naylor Bros. (London), Ltd. | 26 | 5 | 0 |
| "Oil and Colour Trades Journal" | 5 | 5 | 0 |
| Thos. Parsons & Sons | 26 | 5 | 0 |
| Pilchers, Ltd. | 5 | 0 | 0 |
| Pinchin, Johnson & Co., Ltd. (three annual sums of £105) | 315 | 0 | 0 |
| Rawlings Bros., Ltd. (per T. S. Rowden) | 10 | 10 | 0 |
| A. W. Screeton | 5 | 5 | 0 |
| Shand Kydd, Ltd. | 52 | 10 | 0 |
| Storry Smithson & Co., Ltd. | 2 | 2 | 0 |
| Sutherland Publishing Co., Ltd. ("Journal of Decorative Art") | 10 | 10 | 0 |
| Trollope & Colls, Ltd. (per Fabian G. Trollope) | 25 | 0 | 0 |
| Wallpaper Manufacturers, Ltd. (in three annual sums of £100) | 300 | 0 | 0 |
| Walpamur (in three annual sums of £50) | 150 | 0 | 0 |
| Warner & Son (per Sir Frank Warner, K.B.E.) | 3 | 3 | 0 |

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**Pyramid of Cheops Cemetery.**

The Vienna Academy of Science, which has been clearing the cemetery south of the pyramid of Cheops, announces that the discoveries make possible the reconstruction of the enclosure to the pyramids, and that quarry inscriptions which have been unearthed definitely show that the cemetery was laid out in the reign of King Mycerinus. Several interesting *mastabas* have been discovered, the most important belonging to a high official of the sixth dynasty, Seshemnefer.

**A Memorial to Mrs. Pankhurst.**

A memorial fund of £2,500 is being raised to perpetuate the memory of Mrs. Pankhurst, whose leadership inspired women to win their political enfranchisement. The memorial will consist of a headstone for the grave of Mrs. Pankhurst in Brompton Cemetery; a portrait of Mrs. Pankhurst by Miss G. Brackenbury, to be presented to the National Portrait Gallery; and a statue of Mrs. Pankhurst to be erected in Westminster. The statue, which will be 7 ft. in height, will be in bronze on a Portland stone base, and will be the work of Mr. A. G. Walker, A.R.A.

# ARCHITECTS' AND BUILDERS' INQUIRY BUREAU

**Delay in Completion.**

SIR,—I take a contract to build one or two houses through an architect, without quantities. The form of agreement used and signed is that used by the R.I.B.A.; all clauses for and against completion are duly filled in and signed in the usual way. Through unforeseen circumstances the house or houses cannot be finished to contract time by two or three weeks, and, after a struggle, the client takes possession, and moves in. The place is damp; distemper discolours; papers fade and are spoilt through condensation; and several items are complained about. Are we responsible for the discolouration, etc., or does our responsibility cease, except, of course, for the ordinary maintenance clause, which is three months?

The reason I ask is as follows: I have just finished some houses. The architect gave the finishing colours to all positions. The place is damp, and decorations have gone wrong, and where the water or condensation has run down the walls it has lodged on top of architraves and skirtings, and, following the painting up so quickly has pushed the paint up, or, in other words, the paint has floated on the water The client now requires all this work to be put right at once, and the architect will not pay the last instalment unless we do this work. CAMOG.

[**** No reason is given for the delay in completion, or what, in fact, rendered it impossible to complete the work punctually. Unless, therefore, it can be shown that the delay, together with the necessity for doing the decoration work, was caused by some unreasonable act or acts of the employer, or that the terms of the contract have been waived by the conduct of the employer, then the builder is responsible for making good the defects.

It must be remembered bad weather, or storms, constitute no excuse for delay; the builder has contracted that he shall use reasonable diligence in performing his part of the contract, and unless he can show he has done this, even if the contract is rendered impracticable by unforeseen circumstances, he is still liable for any damage that may accrue.—ED.]

**Gauged Mortar.**

SIR,—Does the old prejudice against mixing lime and cement apply to gauged mortar? Does gauged mortar throughout a building make a better job than cement mortar for foundations and lime mortar for remainder; and is gauged mortar suitable for flush-cut pointing? Finally, what are the best proportions for gauged mortar, and is there any increased danger of efflorescence if it is used? B.

**Damp Walls.**

[REPLY TO MR. RICHARD WRIGHT, FEBRUARY 22.]

SIR,—A damp wall robs the house of heat, and the only way to prevent this, and to cure the dampness, is to apply the weatherproofing treatment on the outside of the building. The form this weatherproofing should take will be decided, very largely, by the question of appearance. A stucco coating of waterproofed cement mortar is both effective and economical. Tiling hung upon battens spiked to the wall would afford complete protection against the rain, but upon both æsthetic and practical grounds this treatment is unsuited to the lower parts of the wall.

The various transparent liquid coatings have their uses when a temporary remedy will meet the case, and the same may be said for a brush coating of neat waterproofed Portland cement, but any treatment of so superficial a nature cannot be permanent. The decorative effect of a wash of white waterproofed cement is excellent, and as this costs so little to apply, the renewal after four or five years is justified as a decorative expense, with the benefit of weatherproofing thrown in.

If one is not too insistent upon the drawback of the substance of the wall remaining saturated, the replacement of the interior plastering by a two-coat rendering of waterproofed cement and sand provides a cure for the dampness that is both quick and permanent. It is very important, however, that the danger of condensation be guarded against by skimming over the surface of the waterproofed cement with lime putty and washed sand setting stuff, gauged with a little plaster of Paris, or with a very absorptive plaster. Another very effective finish is to secure sheets of absorptive wall board to the surface of the waterproofed cement rendering by means of plaster of Paris, and the insulating effect of this wall boarding will go a long way towards counteracting the conductivity of the damp wall substance. If it is not desired to interfere with the outside appearance of the wall, this is probably the best solution of the trouble. ARCHITECT.

**Heating Tests.**

[REPLY TO "COLD," FEBRUARY 22.]

SIR,—If the heating system is guaranteed to give a stated temperature, and on test it fails to do so, an action lies for breach of contract. It is not for "Cold" to suggest a remedy, as by putting in additional sections; it is purely a matter of contract. The system has failed to answer the test, and the remedy rests with the heating engineers. TEST.

**Cement Mortar and Efflorescence in Brickwork.**

[REPLY TO "M.," FEBRUARY 22.]

SIR,—I am glad to see that your expert confirms an opinion I have formed only after a good deal of thought and observation. I find that a lime mortar even when heavily gauged with cement does not show this efflorescence upon the brickwork, and I feel this proves that it is not the cement that is the origin, else surely it would appear even in modified form. ARCHITECT.

**Gypsum and Bauxite.**

SIR,—Can you say where we can ascertain figures showing prices and quantities of consumption during the past two or three years (preferably monthly statistics) of the following ores:—

Commercial (75 per cent.) Gypsum.
Chemical (98 per cent.) Gypsum.
Cement (52 per cent.) Bauxite.
Metallurgical (60 per cent.) Bauxite.

READERS.

**"Bronzing" Cast-iron Windows.**

SIR,—What is the best process for treating large three story cast-iron windows, with ornamental aprons between the lights, to represent bronze? We believe there is a special inexpensive process equivalent to painting. G. B. S

# THE WEEK IN PARLIAMENT

**The Architects' Registration Bill.**

During a few minutes available for private members' business, the second reading of the Architects' Registration Bill was moved. Mr. Tasker, however, spoke in opposition to the measure until the time came for the debate, under the rules of the House, to be adjourned.

**An Ancient Megalith.**

Sir Henry Slesser asked the Under-Secretary of State for the Home Department, as representing the First Commissioner of Works, whether his attention had been called to the proposed sale of land at Rollright, Oxfordshire, on which land there stood an ancient megalith; and, if so, whether he would schedule the megalith as an ancient monument.

Sir Vivian Henderson said that the Rollright Stones were in the custody of the Commissioners of Works, whose position as guardians was not affected by changes of ownership. The monument was also scheduled.

**A New Housing Bill.**

Sir W. Bull asked the Minister of Health whether he had considered the Housing Act (1925) Amendment Bill, which was read a first time on Wednesday, February 13, its object being to remedy the hardships resulting from the operation of Section 46 of the Act; and whether, in view of the urgency of the matter, he would recommend that the Bill be given facilities in its further progress.

Mr. Chamberlain said he had considered the Bill, but he was afraid that it would not be practicable to afford special facilities for its further progress. It was the intention of the Government to deal, as soon as practicable, with the question of slums in a comprehensive manner, including the amendment of Section 46.

**Working-class Dwellings.**

Mr. Dennison asked the number of working class houses built since the Armistice to the end of 1928 without State assistance.

Mr. Chamberlain said that returns as to houses erected without State assistance were obtained half-yearly to the end of March and September respectively. The houses were not classified in the returns as working-class and non-working-class houses, but were shown under certain limits of rateable value. The following was a summary of the information obtained:—

*Estimated number of houses built without State assistance since the Armistice to the end of September*, 1928:—

| | |
|---|---|
| Of a rateable value— | |
| (i) Not exceeding £26 ... ... | 297,110 |
| (ii) Exceeding £26 but not exceeding £52 ... ... ... | 102,941 |
| (iii) Exceeding £52 but not exceeding £78 ... ... ... | 13,091 |
| Total ... | 413,142 |

In the Metropolitan Police District the rateable values were £35, £35 to £70, and £70 to £105 respectively.

**Municipal v. Private Enterprise.**

Mr. Chamberlain informed Mr. Longbottom that to the end of 1928, 170,058 houses had been completed by local authorities, and 4,545 by private enterprise, under the Housing, Town Planning, etc., Act, 1919; under the Housing Additional Powers Act, 1919, 39,186 houses had been completed by private enterprise.

**Welsh Regional Planning.**

Sir K. Wood informed Sir R. Thomas that six regional town-planning committees had been established in Wales with power to recommend regional proposals for adoption by their constituent authorities. One of the committees (Deeside) had recommended a regional plan to its authorities, and another (for a large area in North Wales) had only recently been formed. The remainder (in the South Wales coalfields) had made little progress owing to the economic conditions of the areas concerned.

**Housing Requirements.**

Mr. Malone asked the Minister of Health if he would state what statistics he had in his department concerning the housing requirements of England and Wales; what was the present housing shortage; and by what date, under existing legislation, was it anticipated that the population of England and Wales would be properly housed.

Mr. Chamberlain said that elaborate statistics dealing with housing conditions were contained in the census reports, but he did not think it was practicable to make any reliable estimate of total housing shortage. He did not know what the hon. member understood by properly housed; it was plain that there could be no fixed standard. The present annual rate of house construction was, however, very much in excess of normal requirements, and considerable progress was, therefore, being made towards overtaking arrears.

# THE BUILDING TRADE

## WORKMEN'S COMPENSATION
## CONTRAVENING ORDER

There have been several decisions recently on section 1, subsection (2) of the Workmen's Compensation Act, 1925, a provision introduced for the first time in section 7 of the Act of 1923. That subsection provides: "For the purposes of this Act an accident resulting in the death or serious and permanent disablement of a workman shall be deemed to arise out of and in the course of his employment, notwithstanding that the workman was at the time when the accident happened acting in contravention of any statutory or other regulation applicable to his employment or of any orders given by or on behalf of his employer, or that he was acting without instructions from his employer, if such act was done by the workman for the purposes of and in connection with his employer's trade or business."

There have been three cases in the House of Lords on the law as laid down in this section.

Wilsons and Clyde Coal Co. *v.* McFerrin, Kerr *v.* James Dunlop and Co. (1926 A.C. 377; *The Builder*, June 4, 1926); and Garrallan Coal Co. *v.* Devlin (1927 A.C. 59). It was laid down in the two first cases that the subsection did not do away with the main provision of the Act that the accident must arise out of and in the course of the employment (see section 1, subsection (1)), for if the man is acting outside the scope of his employment then the subsection does not apply at all, but that it deals with that class of case where the disobedience to a statutory regulation or the order of an employer would in itself put the man outside the scope of the employment, by providing that that shall not be the case if it can be shown that despite this deviation from directions the man was acting for the purposes of and in connection with the employer's trade or business, but it was held in Garrallan Coal Co. (*ubi sup*) that the onus of proving this was laid upon the workman; and it was also laid down that this is a question of fact.

In Wilson's and Clyde Coal Co. (*ubi sup*) Lord Dunedin put the matter thus: "The result of the section is in my opinion not doubtful. It does not either repeal or amend the radical provision of the principal Act that the accident to entitle the workman to compensation must arise out of and in the course of the employment, but it does introduce a far-reaching though artificial consideration which prevents a certain class of evidence available to show that the accident did not arise out of the employment from being any longer in force."

In that case two men were engaged in blasting operations, and both had laid shots. One of the shots exploded, and the applicant, forgetting that there was a second shot yet to explode, in breach of a regulation under the Explosives in Coal Mines Order approached the shot within a prohibited time and was injured by the explosion of the second shot. Here it was held by the House of Lords that the action of the workman was not in itself extrinsic to the scope of the employment but was made so by the Regulation, and that was precisely the kind of case the subsection was intended to meet, and the disablement being serious and permanent and the workman having acted as he did for the purposes of and in connection with his employer's trade or business, compensation was payable.

In Kerr's case shots were being fired by two miners and a fireman, and after a shot had been fired the applicant proceeded to couple up his detonator to the electric cable without the knowledge of the fireman, whose duty it was under the Coal Mines Order to do this. The fireman was then freeing the firing handle and the shot exploded, killing the miner. Here it was held that the man had gone outside the scope of his employment by arrogating to himself a duty which the Order said should only be performed by a skilled workman, and the accident therefore had not arisen out of or in the course of the employment at all, and thus the subsection had no application.

In Garrallan Coal Co. (*ubi sup*) a man was employed at the bottom of a pit, and under the Coal Mines Act, 1911, there was a regulation that no person should attempt to go on or across the uncovered space of the shaft bottom except for the purposes of the work, and no person shall be allowed to work in such space unless the cages are stopped. The two cages were attached by a rope over a wheel at the top of the pit head, and as one rose the other fell. The man had sent up loaded trucks, and then it was known he had crossed to the empty side, and subsequently his body was found crushed under the cage he had started, from the loaded side. The evidence was that when the loaded cage had gone a little way up and the empty cage had descended from the pit head to the surface level, those on the surface level had something to send to the pit head so they had stopped the cages and reversed the process, sending the empty cage back to the pit head 25 ft. up, and thus the full cage had returned to the bottom after ascending 25 ft., and had crushed the man. It was held by the House of Lords that this Order limited the scope of the man's employment by prohibiting him from entering a territory where he had no business to go except under certain conditions, and that his dependants had not satisfied the onus of proof laid upon them under the subsection that he had done so for the purposes of and in connection with the employer's trade or business. Further, it was held that this was a question of fact which could not be disturbed unless the appellate tribunal was satisfied that no reasonable man could come to the conclusion arrived at on the facts stated. The House considered the facts and inferences drawn by the arbitrator, and declined to alter the decision of the arbitrator, and reversed the finding of the Second Division of the Scotch Court of Session.

These three cases in the House of Lords lay down the law to be applied to this question, and we have set them out, as since it has been held to be a question of fact, in each case whether or not the workman sustained injury out of and in the course of his employment, and under this subsection whether when contravening orders or instructions he can prove that he was doing so for the purposes of or in connection with his employers' trade or business, there may appear a divergence in the cases decided, for the Court of Appeal will not interfere if there is evidence that will support the findings of fact, even although the members of the Court may feel had they been trying the matter themselves they might have come to a different conclusion.

There have been three recent appeals of cases under this subsection, and we will briefly give the result of these decisions. The latest of the three cases is Davison *v.* Holmside and South Moor Collieries, reported in the *Times*, January 16. There the deceased man was an over-man whose duties took him all over the pit, including the haulage way. One day he was making his way to the pit shaft, where he would be relieved from duty, and feeling tired he got on to one of the moving tubs on the hauling way, an act prohibited by the Coal Mines Act, 1911, and was knocked off the tub, sustaining injuries from which he died. The County Court judge had held that the prohibition limited the scope of the man's employment, and the man was doing what he did outside that sphere altogether, and thus the question whether in so acting he was acting for the purposes or in connection with the employer's trade or business did not arise, and the application for compensation failed. The Court of Appeal said this was a question of degree, and therefore one of fact on which there was no misdirection, and the Court would not interfere. This case may be compared with James *v.* Penderyn Limestone Quarries (Hirwain, 1927, B.W. CC 27), where a railway shunter in a private quarry, instead of riding in a wagon being shunted, rode upon a coupling stick placed between the buffer and the draw-bar, a practice forbidden by regulation made under the Factory Act, 1907. He fell off and sustained serious injury, and the Court of Appeal affirmed an award made in his favour, holding that the breach of the prohibition was one which left the workman within the sphere of his employment, and the County Court judge was justified in holding that the man at the time was acting for the purposes of or in connection with his employer's business. In Stokoe *v.* Mickley Coal Co. (1928, 21 B.C.C. 70), the evidence seemed to show that a licensed shot firer in a mine, contrary to regulations, had been drilling out a shot that had misfired, by which act he had lost his life, and the County Court judge had held that he had done so to save himself trouble, and therefore he was not at the time furthering his employer's business, but the Court of Appeal held that the personal motive of the man was not a criterion as to whether the man was acting for the purposes of his employer's business or in connection with it, and as the man was engaged within the sphere of his employment, the subsection applied and his dependants were entitled to compensation.

In Edwards *v.* Gwauncaegurwen Colliery (1927, 20 B.W.C.C. 75), the employers had supplied a special train to convey the men from their work at the face of the shaft, and it was prohibited for men to ride on tubs. The driver had one day substituted a train of tubs. It was held by the Court of Appeal, reversing the County Court judge, that the prohibition was of a class which dealt with conduct within the sphere of the employment, and as it was necessary that the men should leave at a particular time, the act was done for the purposes of the employers' business, and the seriously injured men who knew of the prohibition were yet entitled to compensation.

From the cases we have referred to it will be seen it is difficult to draw the line between cases that are pure questions of fact and those in which the finding involves a point of law with which the appellate Court will deal. Very roughly speaking, it will be found that where the Court of first instance bases its judgment on a simple question of fact, that decision will not be disturbed, but if in order to decide the case it is necessary for the Court to give itself some direction as to the law in order to apply the facts, then this raises a question of law. The last two cases we have cited afford an illustration of this, as the court reversed the decisions in the courts below, because of a definite direction in applying the facts; thus in Stokoe's case that the fact that the man acted to save himself trouble excluded other considerations, and in Edwards' case that the men in riding on tubs added a peril, and this excluded the operation of the subsection.

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**Hadrian's Wall.**

The Chesters Estate, Northumberland, which comprises about 21,000 acres, and includes some miles of Hadrian's Wall, with the excavated fort of Borcovicium, is for sale.

# BUILDERS' FOREMEN & CLERKS OF WORKS

The annual dinner of the Provident Institution of Builders' Foremen and Clerks of Works was held at the Hotel Victoria, Northumberland-avenue, on Wednesday, February 20. Mr. Eric Burt, F.I.O.B., presided. The Annual Report, copies of which were on the tables, stated that during the past year £1,038 1s. had been paid to pensioners. Of this sum, £692 5s. had been paid to 21 men, while 27 women had reecived £336 14s. One child had received £9 2s. Funeral grants amounting to £26 had been paid.

The loyal toasts having been honoured, the toast of "The Provident Institution of Builders' Foremen and Clerks of Works" was proposed by the President, who thanked those who had responded to his appeal for funds. He had, he said, received donations from architects, surveyors, builders, public works contractors, builders' merchants, subcontractors and engineering firms. He could not better describe the aims of the Institution than by reading from the statement at the head of the Annual Report. It was "for the purpose of granting pensions to aged and infirm members, their widows and children, and for making grants of temporary relief." One disturbing fact was that last year expenditure had exceeded income. The Institution had been going nearly 90 years, and during that time had done really magnificent work, and work that had been needed; but, obviously, it could not go on doing that unless income met expenditure. The last thing those who heard him would wish would be that its charitable activities should be in any way curtailed. Another very useful purpose that the Institution served was that it cemented the friendship between the builder's foreman and clerk of works, which was absolutely essential if the architect's design was to be really efficiently carried out. From the builder's point of view, unless there was a good foreman on the job who "got on" with the clerk of works, and worked in close co-operation with him, the job would never be a credit to the builder.

Mr. F. J. Dexter (Treasurer), who responded to the toast, said last year they had had to reduce their pensions in some slight degree, and, in spite of that fact, were something down on the year's working. Now they were faced with the problem of providing the pensions for 1929, for which a sum of £1,000 was required, and, in addition, there were several applications from widows and children of old members.

Mr. W. Mitchell, proposing the toast of "The Visitors," said the hosts were delighted to have so many architects among their guests. Architects had ably and thoroughly supported the Institution in the past. The architect dreamed and designed, and that was the beginning of the builder's work. Besides architects, there were among the guests surveyors, who were to be honoured not only for taking off the quantities but for the more strenuous work of squaring up the job. Builders, he was glad to see, were present, but not in such numbers as had been expected. There were also at the dinner public works contractors. These were doing enormous work in London, and to some extent taking a hand in what was the most important part of building in London to-day, namely, the work underground. Half the building was in these days underground, and that part needed careful looking after so as to avoid any undue strain on water mains, gas company's mains, and so on. The allied industries were also represented, and all were welcome.

Mr. A. S. Benyon responded to the toast.

Mr. Topham Forrest (Superintending Architect, L.C.C.) proposed the toast of "The President." In the building industry, he said, there was no lack of strong personality, and this was particularly true of the big firms such as the one the President was associated with. British architects were sometimes severely criticised for their work and were told to look at the fine work done by American architects. In other words, according to these critics, British architects did not lead the world. But that criticism was never raised against the builders of this country, for these certainly did lead the world.

The health of the President was then toasted with musical honours.

The chairman, in reply, thanked the audience for the compliment, and took the occasion to propose the health of the Honorary Secretary, Mr. Ernest Searchfield, who had, he said, just completed 40 years' service with the Institution. Builders' foremen and clerks of works were not the sort of people to keep a man so long unless he was first-class at his job. How many people were able to say they had kept a job 40 years and given entire satisfaction The Report said of Mr. Searchfield: "We cannot review in any true measure the period of time, with all that has been done by him, his yeoman services, his labours, his sacrifices, and we can only state that his busy time and life given and spent, may be an example to those who shall have one day to take the wheel which must leave his hands." This high tribute would be echoed by everyone who knew their Honorary Secretary, but any expression of thanks to him would not be complete without a mention of Mrs. Searchfield.

The toast was then accorded with musical honours.

The Hon. Secretary briefly responded.

# THE CONCRETE HOUSE COMPETITION

At a dinner given at the Savoy Hotel on Monday last, the prizes were presented to the winners (Mr. D. F. Martin-Smith, Mr. W. Stanley Blount, and Mr. Gordon H. G. Holt) in the £1,500 concrete house competition promoted by the Portland Cement Selling and Distributing Co., Ltd. Mr. Henry S. Horne presided. Amongst the company present were the following:—Mr. Maxwell Ayrton, Sir N. Grattan-Doyle, Mr. Alfred Bossom, Mr. Murray Easton, Mr. Oswald P. Milne, Mr. Ian MacAlister, Mr. Briant Poulter, Mr. Howard Robertson, Mr. W. E. Riley, Mr. T. S. Tait, Mr. Walter Tapper, A.R.A., P.R.I.B.A., Sir Owen Williams, Mr. Wm. Walcot, and Mr. F. R. Yerbury.

Mr. Horne proposed the toast of the prize-winners, and in presenting the prizes, congratulated the winners on the skill and ingenuity they had displayed in their winning designs. It was, he said, "up to" the architects of this country to protect the only thing we could live upon—our traditions—and to see that the country was not completely ruined by the eyesores that were being put up throughout England to-day.

Mr. Martin-Smith, Mr. Stanley Blount and Mr. Gordon Holt, the prize-winners, responded.

Sir N. Grattan-Doyle, M.P., proposed the toast of "Architecture," coupled with the name of Mr. Walter Tapper. In the course of his remarks he said architecture to-day was bound up with steel and cement.

Mr. Tapper, in responding, congratulated the company on instituting such a competition; they were, he said, doing a public service. When so much harm had been done by the erection of small houses and bungalows by unqualified persons, it was well that such a competition should be run and assessed by competent architects. They could build, he said, as well now as they did in the past. The trouble was that the skill and aid of the architect was not brought to bear on the lay-out and design. In addition, there was the ignorance of the layman.

The toast of "The *Daily Mail* Ideal Home Exhibition" was proposed by Mr. Oliver J. S. Piper and responded to by Mr. F. E. Gordon. The prize designs were illustrated in our issue for December 21, 1928. The prize house has been erected at the Exhibition at Olympia.

# PLUMBING TRADES APPRENTICESHIP

A meeting of the Plumbing Trades' National Apprenticeship Council was held at 81, Gower-street, London, on Thursday, January 24, when there were present:—Mr. E. Lesser (in the chair), and Messrs. W. Thacker, W. Morris, B. Hellyer, F. Hooy, T. McKenna, T. McMenemy, J. Pickford, W. Smeaton, R. H. Bew, Hugh Davies, and the hon. secretary, Dr. Clay.

Mr. McKenna announced with regret the sudden death of Mr. L. Macdonald, secretary of the Operative Plumbers' Association, and it was resolved to send letters of sympathy to Mrs. Macdonald and the Association, expressing their sincere condolence and placing on record their great sense of indebtedness to Mr. Macdonald for the services he had rendered to the cause of apprenticeship.

The hon. secretary reported the resignation from the Council of Mr. Hugh Davies, following on his retirement from the Board of Education, and the appointment on the Council in his place by the Board of Mr. J. H. Manson, H.M.I. The chairman having expressed the Council's deep appreciation of Mr. Davies' invaluable services for so many years and the desirability of retaining his co-operation in the future, Mr. Thacker gave notice that he would propose at the next meeting of the Council the co-option of Mr. Davies as a member of the Council under Clause 2 (D).

It was reported that the National Registration of Plumbers had appointed as their representatives on the Council for the year 1929, Messrs. W. H. Smeaton, R. H. Bew, A. E. Wilcockson, and Councillor G. H. Manser. The following were duly elected officers of the Council for the year 1929:—Mr. Ernest Lesser, chairman; Mr. Thacker, vice-chairman; Dr. Clay, hon. secretary and treasurer. The chairman congratulated Mr. Thacker on his appointment as chairman of the Haslingden Education Committee.

It was resolved that 2,000 further copies be printed of the outline of the Council's apprenticeship scheme, at a cost of £1 8s.

Reports regarding the progress of the scheme were received from the North-East Coast, S.E. Lancashire, Birmingham, London, Manchester, and N.E. Lancashire. The position at Leicester was also further considered, and it was resolved, on the motion of Mr. McKenna, that letters be sent both to the National Employers' and the Operatives' Associations, drawing attention to the local failure to adopt the scheme and suggesting that further efforts should be made to bring employers and operatives together with a view to a reconsideration of the whole matter.

From the North-East coast Mr. Glover reported that at the end of 1928 there were in that area 199 apprentices, in the employ of 66 plumbing firms. From S.E. Lancashire it was reported that the scheme was making favourable progress at Southport, and it was hoped that it might soon be adopted at St. Helens. Mr. Thacker reported that 16 further indentures had been executed within the N.E. Lancashire area.

Discussion took place on the question of the syllabus drawn up for lads attending day-time plumbing classes, and on the problem of technical education for the rural apprentice. It was resolved that both matters should be adjourned for further consideration at the ensuing meeting.

In the absence of Mr. Caroe it was agreed to postpone consideration of the report of the interview between him and Messrs. Smeaton and Pickford, representing the Council, and certain officials of the National Federation of Shipbuilding Employers regarding ships' plumbers and the Federation attitude to the Council's scheme.

The accounts for 1928, duly audited by Messrs. Hellyer and Pickford, were presented and passed. The next meeting of the Council was fixed for Friday, April 26, at 2.30 p.m.

# NEW BUILDINGS IN LONDON

*The Editor would be glad to receive information for publication under this heading from architects, builders, or other persons concerned.*

**Barnes.**—Additions.—The plans of Messrs. Yetts, Sturdy & Usher, architects, 34, Gordon-square, W.C.1, have been passed for alterations and additions to "The Wheatsheaf" public-house, Sheen-lane, S.W.

**Becontree.**—Shops.—A large block of shops and flats is to be erected on a site in Woodlane, Gower-street, and Vallance-street, to the plans prepared by Messrs. North, Robin and Wilsdon, FF.R.I.B.A., architects and surveyors, Townsend House, Greycoat-place, S.W.1. A contract for the first block has been placed with Messrs. Baker, Hammond and Laver, Ltd., New Road Works, Rainham, at £9,650. The steelwork will be supplied by Messrs. Matthew T. Shaw and Co., Ltd., Millwall, E.

**Brixton.**—Hall.—The parochial council of St. Matthew's Church, S.W.8, are promoting a scheme for the erection of a large church hall on a site near the church. The plans have been prepared by Mr. E. Stanley Hall, F.R.I.B.A., 54, Bedford-square, W.C.1.

**Brook-street.** — Rebuilding. — Negotiations are proceeding in connection with the proposed rebuilding of the premises known as Nos. 2-3, Haunch of Venison-yard, W.1. Plans are being prepared by Sir John Burnet and Partners, architects, 1, Montague-place, Bloomsbury, W.C.

**Catford.**—Premises.—The London C.C. has sanctioned the erection of shop buildings upon a site on the northern side of Bromley-road, Catford, as submitted by Mr. S. A. S. Yeo, architect, on behalf of the Studio Club.

**Chiswick.**—Studios.—The British Masterpiece Films, Ltd., 12, Regent-street, S.W.1. have acquired a site on the Great West-road, where large film production studios are to be built. The plans have been prepared by Mr. R. H. Brine, L.R.I.B.A., 427, Abbey House, Victoria-street, S.W.1.

**Covent Garden.**—Buildings.—Application has been submitted to the Westminster City Council for new market buildings and proposed lay-out (amended) of Tavistock-street, Southampton-street, and Market-square, Covent Garden.

**Craven Hill.**—Garage.—The Metropolitan Railway Co. have decided to erect a number of garage premises on a site at their Craven Hill depot.

**Croydon.**—Reconstruction. — A contract has been placed with Mr. E. H. Smith, of Wellesley-road, Croydon, for building work in connection with the reconstruction of Croydon baths for the Council. The amount of the tender is £15,250.

**Croydon.**—Shops.—Tenders are now being obtained for the building of a block of two-story premises in the High-street, to consist of a large billiards hall and shops, showrooms, offices, etc. The architects are Messrs. North, Robin and Wilsdon, FF.R.I.B.A., Townsend House, Greycoat-place, S.W.1.

**Ealing.**—Additions.—Additions are to be built at the rear of "The White Hart" public-house, Greenford-road, for Messrs. Watney, Combe, Reid & Co., Ltd. The architects are Messrs. F. J. Fisher & Son, 35, John-street, Bedford-row, W.C.1.

**Ealing.**—Factory.—Plans have been sanctioned by the Ealing Council for the erection in Horsendon-lane of a factory for Messrs. A. Sanderson & Son. The architects are Messrs. A. S. R. Ley & Son, 214, Bishopsgate, E.C.2.

**Ealing.**—Housing.—The Borough Surveyor has submitted plans to the Council for the erection of dwellings on the additional Pope's-lane site of 9¼ acres, and it has been decided to forward these plans to the Ministry of Health for approval.

**Edgware-road.**—Bank.—The Westminster Bank, Ltd., have acquired a site at No. 508, where plans have been prepared for a branch bank. The builder will be Messrs. Harry Neal, Ltd., Green-lane, Northwood, Middlesex. Adjoining the bank will be a block of shops and flats. The architects are Messrs. Hall-Jones and Dewhirst, FF.R.I.B.A., Parliament-mansions, Victoria-street, S.W.1.

**Evesham-road.**—Alterations.—Alterations, etc., are to be carried out at the premises at No. 50. The plans have been prepared by Messrs. W. E. Riley and Glanfield, FF.R.I.B.A., 6, Raymond-building, Gray's Inn, W.C. The quantity surveyor is Mr. Horace W. Langdon, 292, High Holborn, W.C.

**Fetter-lane.**—Reconstruction.—The large premises in Plough-court, owned by the Art Reproduction Co., Ltd., are to be reconstructed. The plans have been prepared by Messrs. Percy Tubbs, Son and Duncan, architects, of 39, Great James-street, W.C.1.

**Gillingham-street.**—Garage.—Tenders are under consideration for the erection of the large garage which is to be built for the Portman Trust, Ltd., 12, Regent-street, S.W.1. There will also be a large petrol service station. The plans have been prepared by Messrs. Mewès & Davis, 22, Conduit-street, W.1. The quantity surveyors are Messrs. Selby and Sanders, Caxton House, Caxton-street, S.W.1.

**Golden Green.**—Ice Rink.—A new company has been formed under the name of Ice-Rinks, Ltd., for the construction of an ice rink on a site at Child's-hill, having a corner frontage to Finchley-road and Llanvanor-road. Mr. Sydney Clough, F.R.I.B.A., of 444, Strand, W.C.2, is the consulting architect. A contract is to be entered into with Messrs. E. D. Winn & Co., Ltd., 4, Halkin-place, S.W.1.

**Golden-square.**—Site.—The large site known as Nos. 30 and 31, Golden-square, and Nos. 8, 9 and 10, Upper John-street, W.1, is to be let on building lease. The arrangements are in the hands of Messrs. Cubitt Nichols, architects and surveyors, 37, Norfolk-street, Strand, W.C.2.

**Great Portland-street.** — Alterations. — Work is to start at once upon alterations and improvements to the premises at No. 50, involving about £10,000. The contractor is Mr. Albert Monk, Lower Edmonton. The plans have been prepared by Messrs. Elgood and Hastie, FF.R.I.B.A., architects, 10, Henrietta-street, W.1.

**Great Portland-street.**—Offices.—The Philharmonic Hall, in Great Portland-street, is to be pulled down, and a modern block of shops, showrooms, and offices will be erected on the great island site. Messrs. Yates, Cook & Darbyshire, of 43, Great Marlborough-street, are the architects. The site covers an area of approximately 5,693 super feet. The contracts are about to be settled.

**Harley-street.**—Clinic.—A large new building is to be erected between Harley-street and Devonshire-place, W.1. It will contain a medical clinic and nursing home for the treatment of patients. The nursing home will be built and equipped on the most up-to-date lines, and will contain 175 beds. The Duke of Atholl and Rear-Admiral B. V. Brooke are included in the list of directors.

**Holland Park-avenue.** — Rebuilding. — The Kensington Borough Council has considered an application for the rebuilding of the "Mitre" public-house, 40, Holland Park-avenue, and 1-1a, 3-3a, and 5-5a, Ladbroke-grove.

**Homerton.**—Repairs.—Plans have been prepared for alterations and repairs to the factory premises at the corner of Tynte-street and Sydney-road, N. The architects are Messrs, Henry Tanner, of Hanover-square, W.1.

**Islington.**—School.—A sum of £33,605 has been sanctioned by the erection of a central and junior school on the Hope-street site.

**Lambeth-road.** — Rebuilding. — Messrs. E. A. Roome & Co., Ltd., of Hackney, are pulling down and rebuilding "The Bell" public-house, 111-113, Lambeth-road, S.E., for Messrs. Watney Combe Reid & Co., Ltd., under the supervision of the company's architect, Mr. G. G. Macfarlane, A.R.I.B.A.

**Milford-lane.**—Rebuilding. — Plans have been approved for the rebuilding of the "Cheshire Cheese" public-house. The contract has been placed with Messrs. J. Dorey and Co., Ltd., Brentford, Middlesex. The architect is Mr. Nowell Parr, F.R.I.B.A., 42, Cranley-gardens, South Kensington, S.W.7.

**New Bond-street.**—Rebuilding.—A start is to be made upon the rebuilding of the premises at No. 81, owned by Messrs. Shanks and Co., Ltd. The contract has been placed with Messrs. George E. Wallis and Sons, Ltd., Medway House, Old Cavendish-street, W.1, at £20,860. The plans have been prepared by Messrs. Claude W. Ferrier, and W. B. Binnie, FF.R.I.B.A., of 4, Pickering-place, S.W.1. The quantity surveyors are Messrs. George Corderoy and Son, of Queen Anne's-gate, S.W.1.

**New Malden.**—Factory.—The Decca Record Co., Ltd., have given instructions for the erection of new garages, welfare block, stores and covered ways at their factories. The general contractors are Messrs. Sims & Russell, of Westminster; and steelwork is by the Standard Steel Co., Ltd., of Croydon. The architects are Messrs. A. S. R. Ley & Son, F. & A.R.I.B.A., 214, Bishopsgate, E.C.2.

**Park Royal.**—Factory.—Mr. G. P. Pratt, of 174, High-street, Acton, W.3, is the architect for a factory on Chase Estate for the Ministry of Labour.

**Southfields.**—Hall.—Messrs. Hudson Bros. (builders), Ltd., of 207, St. John's-hill, S.W.11, are erecting a church hall on the site adjoining 275, Wimbledon Park-road, Southfields, for St. Paul's Church authorities.

**Southwark.**—Housing.—The L.C.C. recommend £65,000 in respect of the acquisition and clearance of property in connection with an improvement scheme for dealing with the Hard-street area, Southwark, including road works.

**Queen's-road.**—Shops.—A contract has been placed with Messrs. G. H. Carter, Ltd., 69, Green-lanes, N.16, for the erection of a large block of shops and showrooms on the site of Nos. 73 to 77. The plans have been prepared by Mr. Ernest G. Cole, F.R.I.B.A., 79, Grosvenor-street, W.1. The quantities have been prepared by Messrs. Evans and Lynde, Dyers'-buildings, High Holborn, W.C.

**Regent-street.** — Alterations.— Alterations and improvements are being made to the shops and showrooms at No. 97, Regent-street, and 22, Swallow-street, W.1. The contractors are Messrs. Courtney Pope and Co., Ltd., 339, Seven Sisters-road, N.

**Stepney.**—Premises.—Mr. W. Gilbee Scott, architect, 25, Bedford-row, W.C.1, has submitted application to Stepney Council for Messrs. Godfrey Phillips, Ltd., as to the erection of new buildings abutting on Corbet-place, Little Pearl-street and Great Pearl-street.

**Upper Norwood.**—School.—The Croydon Education Committee have acquired a portion of the Upper Norwood recreation ground which is situate at the corner of Rockmount and Chevening-roads for the purpose of extending the Rockmount School buildings.

**Wallington.**—Showrooms.—A contract has been secured by Mr. E. H. Smith, of Wellesley-road, Croydon, at £15,680, for the erection of showrooms, etc., in Stanley Park road, Wallington, for the Croydon Gas Co. Mr. A. Douglas Robinson, of 56, Cannon-street, E.C.4, is the architect.

**Worcester Park.**—Houses.—The large freehold estate known as Fullbrooks, a large mansion with two entrance lodges, etc., has just been sold with 34 acres, and is to be developed as a residential estate. Managing Agent is Mr. G. Ellis Jackson, High-street, Barnes, S.W., and not as stated in our last issue.

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**A Correction.**

We are asked to state that "Windy Ridge," Bickley, Kent, illustrated in our last issue, was designed by the firm of Messrs. Elcock & Sutcliffe, FF.R.I.B.A., not by Mr. Sutcliffe alone.

# RATES OF WAGES IN THE BUILDING TRADE

**[Every endeavour is made to ensure accuracy but we cannot be responsible for errors.]**

| | Masons. | Bricklayers. | Carpenters Joiners. | Plasterers. | Slaters. | Plumbers. | Painters. | Labourers. |
|---|---|---|---|---|---|---|---|---|
| Aberdare | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Accrington | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Aldershot | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/0 | 1/2½ |
| Alfreton | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Alnwick | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Altrincham | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Ashford Kent | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/0 | 1/2½ |
| Ashington | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Ashton-under-Lyne | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Aylesbury | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/0 | 1/2½ |
| Aylsham | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/0 | 1/2½ |
| Banbury | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/0 | 1/2½ |
| Barnsley | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Barnstaple | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/0½ | 1/2½ |
| Barrow-in-Furness | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Barry | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Basingstoke | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/0½ | 1/2½ |
| Bath | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/0½ | 1/2½ |
| Bedford | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/1½ | 1/2½ |
| Berwick | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/2 | 1/2½ |
| Bexhill | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/0½ | 1/2½ |
| Birkenhead | 1/10 | 1/10 | 1/10 | 1/11 | 1/10 | 1/9½ | 1/4½ | 1/2½ |
| Birmingham | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ | 1/2½ |
| Bishop Auckland | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ | 1/2½ |
| Blackburn | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ | 1/2½ |
| Blackpool | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ | 1/2½ |
| Bolton | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ | 1/2½ |
| Bournemouth | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/1½ | 1/2½ |
| Bradford | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ | 1/2½ |
| Bradford-on-Avon | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/0 | 1/2½ |
| Braintree | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/0 | 1/2½ |
| Brentwood | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/0½ | 1/2½ |
| Bridgwater | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/2 | 1/2½ |
| Bridlington | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/0½ | 1/2½ |
| Brighton | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/2½ | 1/2½ |
| Bristol | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ | 1/2½ |
| Bromsgrove | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/2½ | 1/2½ |
| Bromyard | 1/3½ | 1/3½ | 1/3½ | 1/3½ | 1/3½ | 1/3½ | 1/2 | 1/2½ |
| Bungay | 1/3 | 1/3 | 1/3 | 1/3 | 1/3 | 1/3 | 11½ | 1/2½ |
| Burnley | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 11½ | 1/2½ |
| Burton-on-Trent | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ | 1/2½ |
| Bury | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ | 1/2½ |
| Buxton | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/7½ | 1/2½ | 1/2½ |
| Cambridge | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/2½ | 1/2½ |
| Canterbury | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/6 | 1/1½ | 1/2½ |
| Cardiff | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/4½ | 1/0½ | 1/2½ |
| Carlisle | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ | 1/2½ |
| Chatham | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/7½ | 1/2½ | 1/2½ |
| Chelmsford | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/0½ | 1/2½ |
| Cheltenham | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/5 | 1/0½ | 1/2½ |
| Chester | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/6 | 1/1½ | 1/2½ |
| Chesterfield | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ | 1/2½ |
| Chorley | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ | 1/2½ |
| Cirencester | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/7½ | 1/2½ | 1/2½ |
| Clacton | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/4½ | 1/3½ | 1/0½ |
| Colchester | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5 | 1/0½ | 1/2½ |
| Coventry | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/5½ | 1/1½ | 1/2½ |
| Cranbrook | 1/3 | 1/3 | 1/3 | 1/3 | 1/3 | 1/7½ | 1/2½ | 1/2½ |
| Crewe | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/3 | 11½ | 1/2½ |
| Cromer | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/6 | 1/1½ | 1/2½ |
| Darlington | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/4 | 1/0 | 1/2½ |
| Deal | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/7½ | 1/2½ | 1/2½ |
| Denbigh | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/4½ | 1/0½ | 1/2½ |
| Derby | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/6 | 1/1½ | 1/2½ |
| Devizes | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/7½ | 1/2½ | 1/2½ |
| Dewsbury | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/4 | 1/3 | 1/0 |
| Doncaster | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Dorchester | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/7½ | 1/7½ | 1/2½ |
| Dorking | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/4 | 1/3 | 1/0 |
| Dovercourt | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/0½ |
| Driffield | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/5 | 1/0½ | 1/2½ |
| Droitwich | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/2½ |
| Dudley | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/6 | 1/1½ | 1/2½ |
| Durham | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7 | 1/7 | 1/2½ |
| Eastbourne | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/7½ | 1/2½ | 1/2½ |
| E. Glam. (Mon.Val.) | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/5½ | 1/1½ | 1/2½ |
| Ely | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/7 | 1/2½ | 1/2½ |
| Exeter | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/4 | 1/0 | 1/2½ |
| Exmouth | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/6½ | 1/2 | 1/2½ |
| Fakenham | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4½ | 1/4½ | 1/0½ |
| Felixstowe | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/4 | 1/4 | 1/0 |
| Folkestone | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/5½ | 1/5½ | 1/1½ |
| Frome | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4½ | 1/4½ | 1/0½ |
| Glossop | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/4 | 1/3 | 1/0 |
| Gloucester | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/7½ | 1/7½ | 1/2½ |
| Godalming | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/6 | 1/5 | 1/1½ |
| Goole | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/4½ | 1/4½ | 1/0½ |
| Gosport | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6½ | 1/6½ | 1/2 |
| Grantham | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/1½ |
| Great Yarmouth | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/6 | 1/6 | 1/1½ |
| Grimsby | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/5 | 1/5 | 1/0½ |
| Guildford | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/7½ | 1/7½ | 1/2½ |
| Halifax | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/5 | 1/5 | 1/0½ |
| Harpenden | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/7½ | 1/7½ | 1/2½ |
| Harrogate | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/5 | .5 | 1/0½ |
| Hartlepools | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Harwich | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/7½ | 1/7½ | 1/2½ |
| Hastings | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/5 | 1/5 | 1/0½ |
| Hatfield | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/4½ | 1/4½ | 1/0½ |
| Hednesford | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6 | 1/6 | 1/1½ |
| Hereford | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/6½ | 1/6½ | 1/2 |
| Herne Bay | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/5½ | 1/4½ | 1/1½ |
| Hertford | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/4 | 1/4 | 1/0 |
| Hitchin | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/0½ |
| Hoddesdon | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/0½ |
| Holt | 1/3 | 1/3 | 1/3 | 1/3 | 1/3 | 1/5 | 1/5 | 1/0½ |
| Huddersfield | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/3 | 1/3 | 11½ |
| Hull | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Hunstanton | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/7½ | 1/7½ | 1/2½ |
| Huntingdon | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4 | 1/4 | 1/0 |
| Isle of Wight | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4½ | 1/4½ | 1/0½ |
| Ipswich | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/4 | 1/4 | 1/0 |
| Keighley | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/5½ | 1/5½ | 1/1½ |
| Kettering | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/7½ | 1/7½ | 1/2½ |
| Kidderminster | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6 | 1/6 | 1/1½ |
| King's Lynn | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/6½ | 1/6½ | 1/2 |
| Lancaster | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/4½ | 1/4½ | 1/0½ |
| Leamington Spa | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/7½ | 1/7½ | 1/2½ |
| Leeds | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Leicester | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Leighton-Buzzard | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/0 |
| Lichfield | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/1½ |
| Lincoln | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Littlehampton | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/0½ |
| Liverpool | 1/10 | 1/10 | 1/10 | 1/11 | 1/10 | 1/10 | 1/9½ | 1/4½ |
| Llandudno | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/1½ |
| Llanelly | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| London: | | | | | | | | |
| 12 m. radius | 1/9 | 1/9 | 1/9 | 1/9* | 1/9 | 1/9 | 1/8 | 1/4 |
| 12-15 m. radius | 1/8½ | 1/8½ | 1/8½ | 1/8½* | 1/8½ | 1/8½ | 1/7½ | 1/3½ |
| Loughborough | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Lowestoft | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/0½ |
| Luton | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/1½ |
| Macclesfield | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/2½ |
| Maidstone | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/0½ |
| Malvern | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/1½ |
| Manchester | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Mansfield | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Margate | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/0½ |
| Market Harb'rough | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/1½ |
| Matlock | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/1½ |
| Melton Constable | 1/3 | 1/3 | 1/3 | 1/3 | 1/3 | 1/3 | 1/3 | 11½ |
| Melton Mowbray | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/2 |
| Merthyr Tydfil | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/2½ |
| Middlesbrough | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Newark | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/1½ |
| Newbury | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/0½ |
| Newcastle-on-Tyne | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Newcastle-ur-Lyme | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| New Forest | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/0½ |
| Newmarket | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/0½ |
| Newport, Mon. | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Northampton | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/2½ |
| Norwich | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/2 |
| Nottingham | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Nuneaton | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Oakham | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/1½ |
| Oldham | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Oxford | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/1½ |
| Paignton | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/2½ |
| Peterborough | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/1½ |
| Plymouth | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/6½ | 1/2½ |
| Pontypridd | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/2½ |
| Portsmouth | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/1½ |
| Preston | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Ramsgate | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/0½ |
| Reading | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/1½ |
| Redcar | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Redditch | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/2 |
| Reigate | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/1½ |
| Retford | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/1½ |
| Ripon | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/1½ |
| Rochdale | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Rochester | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/0½ |
| Rugby | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Saffron Walden | 1/3½ | 1/3½ | 1/3½ | 1/3½ | 1/3½ | 1/3½ | 1/3½ | 11½ |
| St. Albans | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/1½ |
| St. Helens | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Sawbridgeworth | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/0½ |
| Saxmundham | 1/3½ | 1/3½ | 1/3½ | 1/3½ | 1/3½ | 1/3½ | 1/3½ | 11½ |
| Scarborough | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/2½ |
| Sevenoaks | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/0½ |
| Sheffield | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Shrewsbury | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/1½ |
| Sittingbourne | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/0 |
| Southampton | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/1½ |
| Southend-on-Sea | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/2 |
| Southport | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| South Shields | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Stevenage | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/0½ |
| Stockport | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Stockton-on-Tees | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Stoke-on-Trent | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Stourbridge | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/2 |
| Stourport | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/2 |
| Stowmarket | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/0 |
| Stratford-on-Avon | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/1½ |
| Stroud | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/4½ | 1/0½ |
| Sunderland | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Swaffham | 1/3 | 1/3 | 1/3 | 1/3 | 1/3 | 1/3 | 1/3 | 11½ |
| Swansea | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Swindon | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/4½ | 1/1½ |
| Tamworth | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/2½ |
| Taunton | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/0½ |
| Thetford | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/0 |
| Torquay | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Totnes | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/0½ |
| Trowbridge | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/3 | 1/0 |
| Tunbridge Wells | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/0½ |
| Uttoxeter | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/0½ |
| Wakefield | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Walsall | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/2½ |
| Wallsend | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Warminster | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/3 | 1/0 |
| Warrington | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Warwick | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/2 |
| Wells (Norfolk) | 1/3 | 1/3 | 1/3 | 1/3 | 1/3 | 1/3 | 1/3 | 11½ |
| Welwyn Gar. City | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/1½ |
| West Bromwich | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Weston-sup.-Mare | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/5½ | 1/1½ |
| Weymouth | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/3½ | 1/0½ |
| Whitby | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/6½ | 1/2 |
| Wigan | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Winchester | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/0½ |
| Windsor | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/1½ |
| Wisbech | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/0 |
| Wolverhampton | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Woodbridge | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/0 |
| Worcester | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/1½ |
| Worksop | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/1½ |
| Worthing | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/4½ | 1/0½ |
| Wrexham | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/7 | 1/2½ |
| Wroxham | 1/3 | 1/3 | 1/3 | 1/3 | 1/3 | 1/3 | 1/3 | 11½ |
| Wymondham | 1/3½ | 1/3½ | 1/3½ | 1/3½ | 1/3½ | 1/3½ | 1/3½ | 11½ |
| York | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |

* The rate recognised by the National Association of Plasterers, Granolithic and Cement Workers, is 1/11½ per hour.

For Building Trade wages in Scotland, see page 447.

# CONTRACTS, COMPETITIONS, &c.

**For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.**

***The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.***

**Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; County Architect, C.A.; Surveyor, S.; Engineer, E.; Borough Architect, B.A.; Architect, A.**

## BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

### MARCH 4.

**Banchory.**—Houses.—Five blocks of two at Burnett-rd., for T.C. B.S.

**Blackburn.**—Extensions.—To Blackburn and East Lancashire Royal Infirmary. Sames & Green, architects, 14, Richmond-terrace. Dep. £2 2s.

**Bromley.**—Installation.—Of electric lighting in Raglan-rd. Council school, for T.C. W. G. Trend, Borough Electrical Engineer, West-st.

**Dun Laoghaire.**—Additions.—Also alterations to existing schools at Dominican Convent, for Rev. Mother Prioress. Foley & O'Sullivan, architects and civil engineers, Grafton-chambers, Grafton-st., Dublin. Dep. £5 5s.

**Long Eaton.**—Houses.—For U.D.S. H. Raven, Housing Architect.

**Maltby.**—School.—New secondary school and caretaker's house, for West Riding E.C. Education Officer, County Hall, Wakefield.

**Nottingham.**—Paintings.—Internal, at Public Wash-house, Radford-baths, for T.C. T. Wallis Gordon, City E. and S. Dep. £1.

**Southend-on-Sea.**—Public Conveniences and Reinforced Concrete Retaining Wall.—At the rear of the Esplanade Restaurant, Western Esplanade, and incidental works in connection thereto. Robt. H. Dyer, B.E., Municipal-bldgs., Southend-on-Sea Dep. £2.

**Stratton St. Margaret.**—Chapel.—In grounds of Institution, Stratton St. Margaret, for Swindon and Highworth B.G. R. J. Beswick & Son, architects, 10, Victoria-rd., Swindon.

**Swansea.**—Painting.—External cleaning and repainting, etc., to (1) Central Public library and premises, Alexandra-rd., and (2) Sketty Branch library, for T.C. B. E. Morgan, Borough Architect, 3, Prospect-place.

**Yeovil.**—Houses.—Six parlour-type in Park-st., for T.C. B.S. Dep. £1 1s.

**Yeovil.**—Shop Fronts.—Construction of four, in Westfield-rd., Yeovil, for the T.C. Borough Surveyor, Yeovil.

### MARCH 5.

**Belfast.**—Walls.—Boundary walls, gates and wrought-iron railings in connection with widening of Belmont-rd. from Belmont Church-rd. to Wandsworth-rd., for C.B. R. B. Donald, City S. Dep. £1 1s.

**Berwick-on-Tweed.**—Repairs and Materials.—In Lowlands Engineer District of Scottish Command, for War Dept. Commander, Royal Engineers, Lowlands District, 29, Rutland-sq., Edinburgh.

**Dewsbury.**—Houses.—37, on Pilgrim Farm site, for C.B. H. Dearden, A.R.I.B.A., B.S. Dep. £1 1s.

**Exeter.**—Repairs.—Also ordinary works at buildings in charge in district, for H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. 10s. 6d.

**Knaresborough.**—Additions.—Also alterations to institution premises and Guardians' offices, at Stockwell-rd., for B.G. S. Blenkhorn, architect, Westminster Bank-chambers.

**Milnrow.**—Painting.—Inside, etc., of Public Library, Council Offices and Cookery Centre, Newhey-rd., for U.D.C. A. S. Whipp, S.

**Newport (Mon).**—Building.—Assembly promenades at landing stages, Rodney-parade, for Newport Harbour Commissioners. A. J. Phillips, clerk to Commissioners. Dep. £3 3s.

**Nottingham.**—Painting.—Internal cleaning, painting and decorating at Castle Museum and Art Galleries, for T.C. T. Wallis Gordon, City E. and S. Dep. £2.

**Watford.**—Houses.—6 pairs, on Primrose Hill building site, Abbot's Langley, for R.D.C. S., 9, Market-st. Dep. £2.

**Wimbledon.**—Movable Flooring, etc.—Supply and fixing of about 760 super yards, with bearer joists, trestles, furring pieces, etc., over new swimming bath at Latimer Road, for the Wimbledon B.C. Boro. Engr. and Sur., Town Hall, Wimbledon.

***Yorkshire.**—Infectious Diseases Hospital, etc.—Erection of, at Driffield, comprising three pavilions, administration block, laundry block, porter's lodge, roadways and drainage. County Architect, County Hall, Beverley. Dep. £5 5s.

### MARCH 6.

**Clacton.**—Conveniences.—Rosemary-rd., for U.D.C. W. Alston, S.

**Clacton.**—Pavilion.—Portion of cricket pavilion, including public conveniences, at recreation ground, for U.D.C. W. Alston, S.

**Clacton-on-Sea.**—Beach Chalets.—Erection of 24 timber-framed, including concrete retaining wall and incidental works on the West Undercliff, for the Clacton U.D.C. W. Alston, M.Inst. & Cy.E., S., Council Offices, Clacton-on-Sea. Dep. £2 2s.

**Greasbrough.**—Conversions.—Of privies to water closets in Church-st., Green-st., Chapel-st., Mill-st., and adjoining streets, for U.D.C. J. H. Jackson, Clerk, Council Offices, Greasbrough, Rotherham.

**Hove.**—Flat.—Office and store with flat over, in Isabel-crescent, for T.C. B.S.

**London.**—Building.—Filtration plant house and sub-station adjoining open-air bath, Bloemfontein-rd., Shepherds Bush, W.12, for Hammersmith B.C. R. Hampton Clucas, B.E. and S. Dep. £2 2s.

**Manchester.**—Wiring.—House wiring material for T.C. H. C. Lamb, Chief Engineer and Manager, Electricity Department. Dep. £1 1s.

**Reading.**—Houses.—Erection of 109 on sites in the Borough for the Reading Housing and Town Planning Committee. Housing Architect, Municipal Bldgs., St. Laurence's Churchyard. Dep. £2 2s. to Boro. Accountant.

**St. Albans.**—Cottages.—21 cottages at Cotton Mill-lane site, for T.C. F. T. Negus, City E. and S., 38, St. Peter's-st. Dep. £1 1s.

**Slough.**—Painting.—External of 242 houses, for U.D.C. A. Bromly, E.

**Tenterden.**—Cottages.—48, for R.D.C. J. Munn Mace, clerk.

**Wembley.**—Fencing.—550 yds. run of 4-ft. 6-in. high chain link fencing at One Tree Hill recreation ground, for U.D.C. C. R. W. Chapman, E. and S.

**Woolwich.**—Terrazzo Flooring.—Laying of, at the Institution, Plumstead High-st., Plumstead, for the Guardians of the Woolwich Union. Whincop & Channer, 47, Thomas-st., Woolwich.

### MARCH 7.

***Bermondsey.**—Hard Tennis Court.—At the Ladywell Institution, Ladywell-rd., S.E.13., for the Bermondsey Parish Council. Henry H. Reeve, Clerk, Guardians' Offices, 283, Tooley-st., S.E.1.

**Bromley.**—Repairs.—To houses, for R.D.C. L. O. Wall, clerk.

**Cornwall.**—Painting.—Cleaning and repainting station buildings, etc., at Penryn, Falmouth and Perranporth, for G.W.R. F. R. E. Davis, secretary, Paddington Station, London, W.2.

**Croydon.**—Hospital Buildings, etc.—Various additions to Blocks A and B, new chimney shaft, etc., at the Sanatorium, Cheam, Surrey, for the Croydon and Districts Jt. Smallpox Hospital Bd. G. F. Carter, Sur. to the Board, Town Hall, Croydon. Dep. £3 3s.

**Dorchester.**—Houses.—4 at Grimstone and 8 at Martinstown, for R.D.C. F. T. Maltby, L.R.I.B.A. chartered architect.

**Thurles.**—Houses.—14, for U.D.C. V. Kelly, architect, 4 and 6, Grafton-st., Dublin. Dep. £3 3s.

### MARCH 8.

***Epsom.**—Alterations and Additions.—To be carried out at Cuddington Isolation Hospital, Banstead, for the Epsom (Rural), Sutton, Carshalton and Leatherhead Joint Hospital Board. Alick G. Ebbutt, clerk, "Mead House," 61, South-st., Epsom. Dep. £3 3s.

**Nottingham.**—Houses.—46 on Windmill-lane estate, for T.C. T. Cecil Howitt, architect, 58-59, Long-row. Dep. £1.

**Southampton.**—Convenience.—Erection of, opposite the Central Library in London-rd., for the Southampton Corporation. Borough Engineer's Office, 33-35, French-st., Southampton. Dep. £2 2s.

### MARCH 9.

**Chadderton.**—Extensions.—Also alterations to sewage disposal works. James Diggle & Son, engineers, Hind-hill-st., Heywood. Dep. £2 2s.

***Darlington.**—Hospital Buildings.—Erection of new ward blocks and operating theatres at the Memorial Hospital, Darlington. W. J. Moscrop, F.R.I.B.A., architect, Darlington. Dep. £3 3s.

**Hove.**—Pavilion.—Extending bowling pavilion on Western lawns, for T.C. B.S.

**Kingswinford.**—Cottages.—20 non-parlour type, on Tiled House site, Pensnett, for R.D.C. W. Meredith, S. Dep. £2 2s.

**Marple.**—Houses.—12, on Brindley Farm housing site, for U.D.C. D. J. Diver, S. Dep. £1 1s.

**Near Ballinrobe.**—Improvements.—At Creagh House, which it is proposed to convert into a County Sanatorium, for Mayo County Board of Health and Public Assistance. T. T. Flanagan, C.S., Courthouse, Castlebar. Dep. £2 2s.

**Portslade-by-Sea.**—Houses.—91 on site on west side of Church-rd., for U.D.C. D. V. Howard, architect and surveyor. Dep. £3.

**Wrexham.**—Houses.—36 non-parlour type, on Huntroyde estate, for T.C. J. England, Borough Engineer, Architect, 1, Grosvenor-rd. Dep. £1 1s.

### MARCH 11.

**Belfast.**—Limewashing.—Of houses, for C.B. R. Mever, T.C.

**Richmond, Surrey.**—Baths.—Additional dressing accommodation at the Public Baths, Parkshot, for the Richmond Borough Council. B.E. and S., Town Hall, Richmond. Dep. £1 1s.

### MARCH 12.

**Cheltenham.**—Home.—Nurses' home in grounds of Poor Law Institution, Swindon-rd., for B.G. L. W. Barnard & Partners, architects, Promenade. Dep. £2.

***Essex.**—Additions and Alterations.—At the County High School for Girls, Loughton, for the Essex C.C. Jno. Stuart, F.R.I.B.A., County Architect, Springfield Old Court, Chelmsford. Dep. £2 2s. to F. H. Owers, F.S.A.A., County Accountant, Duke-st., Chelmsford.

**Featherstone.**—School.—New Middle school for 360 scholars, together with caretaker's house, for West Riding E.C. Education Department, County Hall, Wakefield.

**Fort Williams.**—Lighting.—Supply, delivery and installation of all material required for electric power and lighting distribution system at Works, for North British Aluminium Co., Ltd. Company's Offices, Adelaide House, King William-st., London, E.C.4.

**Hayes.**—Building.—Caretaker's lodge and all appurtenant work thereto at Barra Hall Park, and mortuary, coroner's room, motor ambulance station, garages and workshop, etc., at Town Hall, for U.D.C. G. H. Connor, E. and S. Dep. £2 2s.

**Kearsley.**—Houses.—80, of non-parlour type, with sewers, roads and footpaths, on Taskers-lane housing site, for U.D.C. E. Shaw, S. Dep. £2.

**Kilrush.**—Houses.—8, at Kilrush, Co. Clare, for Irish Sailors' & Soldiers' Land Trust. R. E. Beckerson, Chief Clerk, 50/51, Upper Mount-st., Dublin. Dep. £5 5s.

**Normanton.**—Extensions.—Of Grammar school, for Governors. T. R. Robinson, Technical School.

**Sidmouth.**—Demolition Work.—Demolition of the existing market building at Sidmouth. Tender No. 2. Dep. £1 1s. Market Building and Public Convenience; erection of, at Sidmouth, Tender No. 1, for the Sidmouth U.D.C. L. M. Blanchard, S. to the Council, Council Offices, Sidmouth.

### MARCH 13.

***Bury.**—Houses and Flats.—Erection of (*a*) 90 two-bedroom houses; (*b*) 8 three-bedroom houses; (*c*) 88 two-bedroom flats, for the Bury B.C. Borough Engineer's Office, Bank-st., Bury. Dep. £5.

**Surrey.**—Engineering Work.—Supply and installation of two steam chambers, hot closet and carving table, at the Holborn schools, London-rd., Mitcham, Surrey, for the Holborn Guardians. Chas. J. Cross, Clerk, Administrative Offices, 53, Clerkenwell-rd., E.C.1.

### MARCH 14.

**Dingle.**—Heating, Plumbing, heating, lighting and sanitary works at Colaiste-Ide (Burnham House) Preparatory Training College, Dingle, Co. Kerry, for Commissioners of Public Works. T. Cassedy, secretary, Office of Public Works, Dublin. Dep. £1.

**Minsterley (Salop).**—Alterations.—Also repairs to Minsterley school, for Managers. J. R. Gornall, Minsterley.

**Sheffield.**—Installation.—Heating installation at Lodge Moor Hospital extension, for T.C. W. Geo. Davies, F.R.I.B.A., City Architect. Dep. £2.

**Sheffield.**—Works and Plant.—Required in connection with the building and equipment of a new electricity generating station at Blackburn Meadows, Sheffield, for the Sheffield Electric Supply Committee. S. E. Fedden, General Manager and Engineer, Commercial-st., Sheffield. Dep. £3 3s. in respect of each specification.

**Smallburgh.**—Cottages.—Ludham, 3 pairs; Sutton, 6 pairs, for R.D.C. A. Peploe, clerk, North Walsham. Dep. £1.

**Wardle.**—School.—Council school at Wardle, near Rochdale, for Lancashire E.C. Stephen Wilkinson, F.R.I.B.A., County Architect, 16, Ribblesdale-place, Preston. Dep. £2.

**Welwyn Garden City.**—Houses.—Erection of 100 of working-class type, to be erected at Welwyn Garden City, for the U.D.C. Council's Architect, H. C. Lander, F.R.I.B.A., 21, Bedford-row, London, W.C.2. Dep. £2 2s.

**Whitby.**—Extensions.—To hospital premises, for Board of Management of Ellesmere Port and District Cottage Hospital. T. W. Francis, hon. secretary, Council Offices, Ellesmere Port. Dep. £2 2s.

### MARCH 15.

***Birmingham.**—Various Works.—(*a*) Approach road; (*b*) Power House; (*c*) Garage; and (*d*) Canal Wall, erection of works in connection with refuse disposal and salvage works, Rotton Park-st., and for the erection of garage at the Lifford Salvage Works, for the Salvage and Stables Committee of the Birmingham Corporation. Manager, Corporation Salvage Department, 161, Corporation-st., Birmingham. Dep. £3 3s.

**London.**—Heating.—Accelerated low-pressure hot water heating at "Terminus" Telephone Exchange, King's Cross, W.C., for H.M.O.W. Contracts Branch, H.M. Office of Works, King Charles-street, S.W.1. Dep. £1 1s.

**Peterborough.**—Town Hall, Shops and Offices.—Erection in Narrow St., for the Peterborough Corporation. W. T. Mellows, T.C., Town Hall, Peterborough, Northants. Dep. £5 5s.

### MARCH 18.

**Irlam.**—Houses.—50, upon Lord-st. housing site at Cadishead, for U.D.C. E. and S. Dep. £2.

### MARCH 19.

***Blackburn.**—Elementary School.—Erection of, and works incidental thereto, at Audley, Blackburn, for the Blackburn C.B. H. M. Webb, Borough and Water Engineer, Town Hall, Blackburn. Dep. £2.

**Carmarthen.**—Reservoir, etc.—Also hot and cold water supply systems at Mental Hospital, for Joint Counties Mental Hospital Committee. W. J. Wallis-Jones, clerk to Visitors, 34, Quay-st. Dep. £3 3s.

**Dewsbury.**—Tiles.—5,800 super. yds. filter floor tiles at sewage disposal works, Mitchell Laithes, for C.B. H. Dearden. B.E.

**Hammersmith.**—Work.—And materials required in the erection of a Branch Library and Infant Welfare Centre at Western Avenue, Shepherd's Bush, for the Hammersmith B.C. R. Hampton Clucas, M.Inst.C.E., L.R.I.B.A., B. Engr. and S., Town Hall, Hammersmith, W.6. Dep. £2 2s.

**MARCH 19.**

**Carlingnose.**—Repairs and Materials.—In Lowlands Engineer District of Scottish Command, for War Dept. Commander, Royal Engineers, Lowlands District, 29, Rutland-sq., Edinburgh.

**Newton Abbot.**—Houses.—18, at Chudleigh, for R.D.C. B. H. Palmer, L.R.I.B.A., 11, Union-st.

**Ormskirk.**—Building.—Additional engine-house and other work at Scarth Hill pumping station, for Southport, Birkdale and West Lancashire Water Board. C. B. Ede, Engineer and Manager, 14, Portland-st., Southport. Dep. £2 2s.

***Southport.**—Engine House and other work.—(Contract No. 3). Construction of, at Scarth Hill Pumping Station, near Ormskirk, for the Southport, Birkdale and West Lancashire Water Board. C. Burton Ede, M.Inst.C.E., Engineer and Manager, 14, Portland-st., Southport. Dep. £2 2s. to the Board.

**MARCH 21.**

***Greenwich.**—Alterations and Additions.—To form new wards for children at the Greenwich and Deptford Hospital, Vanbrugh Hill, Greenwich, S.E.10. Alfred Roberts, F.R.I.B.A., 92, London-st., Greenwich, S.E.10. Dep. £2.

**MARCH 23.**

**Bakewell.**—Shelter.—Also conveniences at recreation ground, for U.D.C. S. Dep. £1 1s.

**Grantham.**—Buildings.—Police buildings, with weights and measures office and public mortuary, for T.C. P. A. Benn, B.S. Dep. £3 3s.

**MARCH 26.**

**London.**—Painting, Pointing and Repairs.—At the Bethnal Green Hospital, Cambridge-rd., Bethnal Green, E.2, for the Bethnal Green Board of Guardians. C. Faulkner Jones, Clerk, Guardians' Offices, Bishop's-rd., Bethnal Green, E.2. Dep. £2.

**MARCH 27.**

**Cairo.**—Electric Lighting.—In town of Fashn, for Ministry of Interior, Section des Municipalites et Commissions Locales, Cairo. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Reference number B.X. 5037.)

***Lambeth.**—Repairs, Renovation, Decorations, etc.—To the two Chapels at the Lambeth Cemetery, Blackshaw-rd., Tooting, for the Lambeth B.C. Osmond Cattlin, B. Engineer, Lambeth Town Hall, Brixton, S.W.2.

**NO DATE.**

**Altrincham.**—Alterations.—To 23, George-st., for Altrincham Division Conservative Association. G. Sisam, 12, Dunham-rd.

**Exeter.**—Additions.—New ambulance entrance, sterilising room and alterations to operation block, and new rooms and alterations, Victoria Wing, for Royal Devon and Exeter Hospital. A. C. Harbottle, architect, County-chambers. Dep. £2 2s.

**Ipswich.**—Alterations.—To Ivry House, Ivry-st., for Board of Management of East Suffolk and Ipswich Hospital, Cautley & Barefoot, AA.R.I.B.A., architects, The Thorofare.

**King's Lynn.**—Additions.—Also alterations at Poor Law Institution, Extons-rd., for B.G. E. E. Colman, architect. Dep. £3 3s.

**Monkfryston.**—House.—J. P. Firth, A.R.I.B.A., architect, 4, King-st., Wakefield.

**Nevin.**—Golf House.—For the Nevin and District Golf Club. R. Williams, architect, Barclays Bank-chambers, Pwllheli.

***Shrewsbury.**—School.—Erection of Senior (elementary) Boys' and Girls' schools, for the Shrewsbury B.C. Bernard Widdows, architect, St. James Chambers, Derby. Dep. £3 3s.

## MATERIALS, etc.

**MARCH 4.**

**Bognor.**—Cement, etc.—For U.D.C. J. Draper, E. and S.

**Bradfield.**—Highway Materials.—For R.D.C. C. Ford, Highways Surveyor.

**Clayton-le-Moors.** — Highway Materials. — For U.D.C. A. Dodgson, S.

**Clutton.**—Stone, etc.—For R.D.C. T. Orchard, Highways Surveyor, Hallatrow, near Bristol.

**Coulsdon and Purley.**—Road Materials.—For U.D.C. G. A. Ballard, S., 69, Brighton-rd., Purley.

**Derby.**—Builders' Materials.—For C.B. C. A. Clews, B.S.

**Dover.**—Builder's Materials.—For Dover Harbour Board. R. Mowll, Register of Dover Harbour Board, Castle-st.

**Gellygaer.**—Limestone, etc.—Also tar spraying. F. Read, E. & S.

**Gellygaer.**—Tarspraying, etc.—For U.D.C. F. Read, E. and S.

**Hoylake and West Kirby.**—Road Materials.—For U.D.C. R. W. Fraser, E. & S.

**Litherland.**—Haslingden Kerbing, etc.—For U.D.C. G. Ponsford, E. and S.

**Newark.**—Granite.—For tarspraying, for R.D.C. R. Oakden, District Surveyor, 27, Winchilsea-av.

**Norton.**—Stone, etc.—For R.D.C. L. Richmond, clerk, Union Offices, West Bar, Sheffield.

**Prescot.**—Road Materials.—For U.D.C. F. A. Gregson, E. & S.

**Rochford.**—Road Materials.—For R.D.C. A. C. Madge, Rayleigh, S.

**Rochford.**—Tar.—For R.D.C. S.

**Sevenoaks.**—Builders' Materials.—For U.D.C. S.

**Southwell.**—Road Materials.—For R.D.C. R. Morris, Highway Surveyor, 8, Westgate.

**Stroud.**—Highway Materials.—For R.D.C. L. Randerson, District S., Meopham, near Gravesend.

**Sunbury-on-Thames.** — Road Materials. — For U.D.C. H. F. Coales, E. and S.

**Tenterden.**—Granite, etc.—For R.D.C. W. L. C. Turner, District Surveyor.

**Thingoe.**—Broken Granite.—For R.D.C. C. D Bright, S.

**Thingoe.**—Pit Stone.—For R.D.C. C. D. Bright, S., 65, Churchgate-st., Bury St. Edmunds.

**Tipton.**—Highway Materials.—For U.D.C. K. W. Madin, clerk.

**Watford.**—Builders' Materials.—For T.C. W. W. Newman, B.E.

**Winsford.**—Road Materials.—For U.D.C. S.

**MARCH 5.**

**Bollington.**—Road Materials.—For U.D.C. Samuel Knight, clerk, Council Offices, Macclesfield.

**Burnley.**—Road Materials.—For R.D.C. F. Hewitt, S.

**Horsham.**—Granite, etc.—For R.D.C. W. R. Guilford, S., 42, Albion-ter.

**Leeds.**—Builders' Materials.—For Tramways and Transport Dept. R. L. Horsfield, General Manager and Engineer, 1, Swinegate.

**Leeds.**—Setts.—1,000 tons of granite paving setts, for T.C. R. L. Horsfield, General Manager and Engineer, 1, Swinegate.

**Llanelly.**—Lime, etc.—For R.D.C. A. Watkins, clerk.

**Maldon.**—Road Materials.—For T.C. B.E.

**Peterborough.**—Granite, etc.—For T.C. W. H. A Court, City E. and S.

**Thirsk.**—Whinstone.—For R.D.C. J. W. Lupton, S.

**MARCH 6.**

**Burnley.**—Road Materials.—For R.D.C. F. Hewitt, S., 18, Nicholas-st.

**Clacton.**—Highway Materials.—For U.D.C. S.

**Haywards Heath.** — Tar. — For U.D.C. G. Plummer, S.

**Kingston.**—Builder's Materials, etc.—For B.G. W. Taylor, clerk, Union Offices, Coombe-rd.

**Loughborough.**—Highway Materials, etc.—For T.C. W. Granger, B.S.

**Merley.**—Road Materials.—For T.C. F. Turner, B.E.

**Shifnal and Blymhill.**—Road Materials.—For R.D.C. C. H. Abbey, S., Market-sq.

**Wembley.**—Road Materials.—For U.D.C. C. R. W. Chapman, E. and S.

**West Ham.**—Building Materials.—For B.G. L. E. Fraquet, clerk to Guardians, Union-rd., Leytonstone, E.11.

**Westbourne.**—Granite, etc.—For R.D.C. J. W. Loader Cooper, clerk.

**MARCH 7.**

**Chard.**—Road Surface Materials.—For R.D.C. F. Nicholson, District Surveyor, Crewkerne-rd.

**Gravesend.**—Stone, etc.—For T.C. F. T. Grant, B.E. and S.

**MARCH 8.**

**Guildford.**—Granite, etc.—For R.D.C. J. Anstee, E. and S.

**New Forest.**—Highway Materials.—For R.D.C. F. Heather, S.

**MARCH 9.**

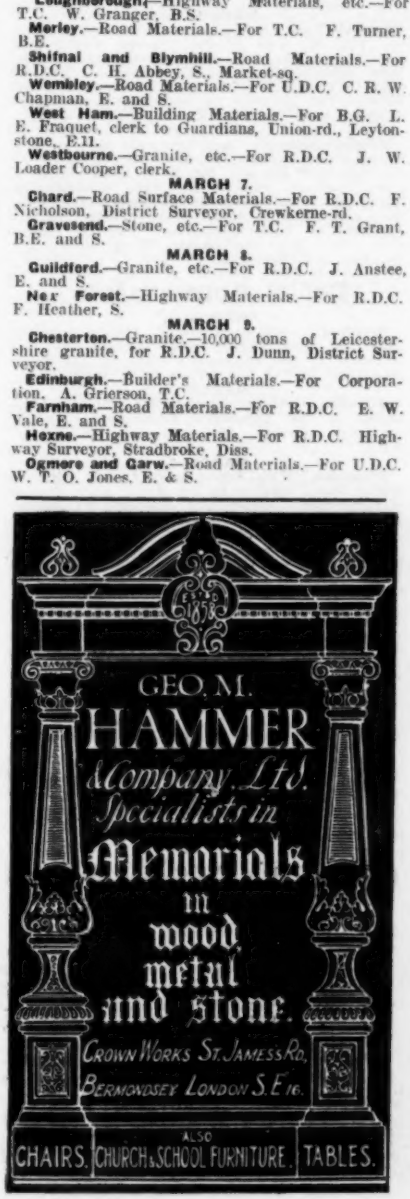
**Chesterton.**—Granite.—10,000 tons of Leicestershire granite, for R.D.C. J. Dunn, District Surveyor.

**Edinburgh.**—Builder's Materials.—For Corporation. A. Grierson, T.C.

**Farnham.**—Road Materials.—For R.D.C. E. W. Vale, E. and S.

**Hoxne.**—Highway Materials.—For R.D.C. Highway Surveyor, Stradbroke, Diss.

**Ogmore and Garw.**—Road Materials.—For U.D.C. W. T. O. Jones, E. & S.




**Rathmines and Rathgar.**—Builder's Materials.—For U.D.C. S.

**Rochdale.**—Road Materials, etc.—For C.B. B.S.

**St. Faith's.**—Road Materials.—For R.D.C. A. Paterson, S., 39, Catton Grove-rd., Norwich.

**Stokesley.**—Roadstone.—For R.D.C. H. Lee, Highway S.

**Wrexham.**—Highway Materials.—For T.C. J England, B.E.

**NO DATE.**

**Cardiff.**—Cement, etc.—For directors of the Powell Duffryn Steam Coal Co., Ltd. Stores Manager, Ystrad Mynach, near Cardiff.

**Thirsk.**—Tar-spraying.—Of district roads, for R.D.C. J. W. Lupton, S., Castlegarth, Thirsk.

## ENGINEERING, IRON AND STEEL

**MARCH 4.**

**Edinburgh.**—Bridges.—Two steel plate-web girder bridges, each of one span, including abutments, wingwalls, and steel trough decking, on new Glasgow to Edinburgh-rd., section F-G (Dechmont to Broxburn), for T.C. D. A. Donald, engineer, 271, Alexandra-parade, Glasgow, E.1. Dep. £3 3s. of about 400 yds., for R.D.C. W. J. Grant, S.

**Essex.**—Widening.—Of Hartford-end bridge on Chelmsford-Felsted road, in Parishes of Great Waltham and Felsted, for C.C. W. H. Morgan, C.S., Old Court, Chelmsford. Dep. £2 2s.

**Essex.**—Widening.—Of Absol bridge on North-End-Felsted road, in Parishes of Great Waltham and Felsted, for C.C. W. H. Morgan, C.S., Old-Court, Chelmsford. Dep. £2 2s.

**Essex.**—Reconstruction.—Of Red bridge and culvert on Barking-Rainham road, in Parishes of Rainham and Hornchurch, for C.C. W. H. Morgan, C.S. Dep. £2 2s.

**Newcastle-upon-Tyne.** — Improvements. — Timber dolphins and connecting gangways at Northumberland dock entrance, River Tyne, for Tyne Improvement Commission. A. Blacklock, Secretary, Tyne Improvement Commission Offices, Bewick-st., Newcastle-upon-Tyne. Dep. £1 1s.

**Newry.**—Reconstruction.—Of part of North-quay of the Albert Basin, for Port and Harbour Trust. E. A. Lamb, secretary. Dep. £2 2s.

**Wednesfield.**—Sewers.—Sewers ranging from 21-in. to 6-in. in diameter, with manhole and a canal, and railway crossing, together with small pumping station and other incidental works, for U.D.C. A. H. S. Waters, consulting engineer, 4, Lichfield-st., Wolverhampton. Dep. £3 3s.

**MARCH 5.**

**Godstone.**—Drainage.—Construction of about 600 yds. of 9-in. diameter stoneware pipe sewers, together with manholes, ventilating shaft and other appurtenant works at Limpsfield and Oxted, for R.D.C. John Taylor & Sons, engineers, Caxton House, Westminster, S.W.1. Dep. £5.

**MARCH 6.**

**Bogota.**—Bridge.—Steel bridge for river Tatacoa on Huila-Tolima-Caqueta Railway, for Columbian Ministry of Public Works. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. No. A.X. 7548.)

**MARCH 7.**

**Leighton Buzzard.**—Improvements.—And additions to the water supply, for U.D.C. The engineers, Parker, Pearson & Ross Hooper, Dallas-chambers, Chippenham, Wilts. Dep. £5.

**MARCH 9.**

**Brosna.**—Water Supply.—For Kerry Board of Health and Public Assistance. E. M. Murphy, consulting engineer, 27, Molesworth-st., Dublin. Dep. £5 5s.

**MARCH 13.**

**Chailey.**—Sewerage.—Laying of about 630 yds. of 9-in. stoneware pipe sewers, with all necessary manholes, etc., and for additional works of sewage disposal at outfall, at Ditchling, for R.D.C. H. B. Nichols, engineer, 13, Victoria-st., Westminster, S.W.1. Dep. £3 3s.

**MARCH 14.**

**London.**—Steel Girders.—For G.W.R. F. R. E. Davis, secretary, Paddington Station, W.2. Dep. £2 2s.

**MARCH 18.**

**Bann.**—Drainage.—Flood gates in Toome, Portna and the Cutts Navigation Weirs on the Lower Bann River, for Government of Northern Ireland. Secretary, Ministry of Finance, 15, Donegall-sq. West, Belfast. Dep. £10.

**Nairn.**—Harbour Improvements.—For T.C. Henderson & Nicol, chartered civil engineers, 21, Bridge-st., Aberdeen.

**MARCH 18.**

**Holland (Lincs).**—Bridge.—Reinforced concrete bridge over the Vernatt's drain, Spalding, for C.C. Wm. A. Rogerson, C.S. Dep. £3 3s.

**London.**—Reconstruction.—In reinforced concrete on pile foundations of a jetty, also reconstruction and widening in timber of part of the pierhead; supplying and laying of a total length of about 600 lin. yds. of 24-in. diameter cast-iron pipes and other incidental works, for L.C.C. Chief Engineer, Old County Hall, Spring-gardens, S.W.1. Dep. £5.

**Newton Abbot.**—Drainage.—Construction of about 6,350 lin. yds. of stoneware pipe sewers, ranging from 24-in. to 6-in. diameter, and about 520 lin. yds. of cast-iron pipe sewers, ranging from 11 in. to 7 in. diameter, together with manholes, pumping station, and other incidental works, for U.D.C. F. W. S. Stanton, E., Westminster, S.W.1. Dep. £5.

**MARCH 20.**

**London.** — Bridgework. — For Director-General, India Store Department. Secretary.

**Swinton.**—Sewage.—New sewage disposal works, comprising detritus pits, screen chambers, storage tank and motor house. Dortmund settling tanks, bio-aeration tanks, final settling tanks, mud

drying beds, etc., and other appurtenant works, for U.D.C. W. H. Radford & Son, engineers, Albion-chambers, King-st., Nottingham. Dep. £3 3s.

**MARCH 22.**

**Sydney.**—Bridge.—Steelwork for superstructure of a highway bridge, for Main Roads Board of New South Wales. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. A.X. 7453.)

**MARCH 30.**

**Coleraine.**—Reconstruction.—.—Also repair of Bann Navigation Works at mouth of River Bann, for Harbour Commissioners, Henderson & Nicol, chartered civil engineers, 21, Bridge-st., Aberdeen. Dep. £3 3s.

**APRIL 8.**

**Melbourne.**—Towers.—Galvanised steel transmission line towers, for State Electricity Commissioners of Victoria. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. A.X. 7401.)

## ROAD, SEWERAGE, AND WATER WORKS

**MARCH 4.**

**Loughton.**—Making-up.—With concrete carriageway, part of Goldings-rd., for U.D.C. H. White, S. Dep. £1 1s.

**Portsmouth.**—Paving.—Laying compressed rock asphalt paving on concrete put in by the Corporation in (1) Church-st., (2) St. John's-rd., (3) Arundel-st. from Commercial-rd. to Church Path, and (4) Arundel-st. from St. John's-rd. to Fratton-rd., and for maintaining same in thorough repair, for T.C. R. J. Jenkins, City E. Dep. £2 2s.

**Portsmouth.**—Paving.—Laying asphalt macadam paving on concrete put in by Corporation in Crasswell-st., for T.C. R. J. Jenkins, City E. Dep. £2 2s.

**Rochester.**—Making-up.—Part of King's-avenue, for T.C. City S. Dep. £1 1s.

**Sittingbourne.**—Sewer.—Laying about 316 yds. run of 9 in. dia. stoneware soil sewer, together with manholes, etc., in upper part of Bell-rd., for U.D.C. S.

**Sleaford.**—Tarspraying.—Providing and laying complete about 4,000 yds. of tarmacadam in 2-in. and 3-in. thicknesses; also spraying with bitumen or bituminous compound about 100,000 super. yds. on roads, and supply of about 500 tons in all of ½-in. or ¾-in. crushed or steel slag clean chippings, for U.D.C. S.

**Slough.**—Making-up.—Of Wellesley-rd., for U.D.C. A. Bromly, E.

**MARCH 5.**

**Godstone.**—Sewers.—Construction of about 600 yds. of 9-in. diameter stoneware pipe sewers, together with manholes, ventilating shaft and other appurtenant works, for Godstone R.D.C. J. Taylor & Sons, engineers, Caxton House, Westminster, S.W.1. Dep. £5.

**London.**—Paving.—Also forming roadway and footways of (a) Cassiee-rd., Catford, area about 2,950 yds.; (b) Chudleigh-rd., Brockley, area about 4,400 yds., for Lewisham B.C. B.S.

**Sale.**—Making-up.—Of Roebuck-lane, Albion-grove, Kelsall-st., Palmer-st., Goodier-st., Albion-st., Darley-st., Osborne-ter., Hyde-grove, and all through passages in connection with the aforesaid streets, for U.D.C. E. Bleukley, E. and S. Dep. £2 2s.

**MARCH 6.**

**Blackrock.**—Main.—Laying down of about 1,000 yds. of 6-in. water main at Monkstown, for U.D.C. S.

**Taunton.**—Surface Dressing.—Of 300,000 sq. yds. of roads, for R.D.C. S. Orchard. S.

**Wembley.**—Tarpainting.—Of approximately 130,000 yds. super. of roads, for U.D.C. C. R. W. Chapman, E. and S.

**Wembley.**—Culvert.—60 yds. of reinforced concrete culvert, of section 7 ft. by 3 ft., at Preston-rd., for U.D.C. C. R. W. Chapman, E. and S. Dep. £1 1s.

**MARCH 7.**

**Leeds.**—Paving.—Kerbing, flagging, tar-paved footpaths and tar-macadamising carriageways in Strathmore-st., Trafford-grove, Berkeley-crescent, Berkeley-view, Berkeley-st., Berkeley-rd., Upland-grove, Alaska-place, and reinstating of trench openings, also kerbing, paving, etc., New-rd. (York-rd. to Ivy-grove), for T.C. Highways Engineer, 155, Kirkstall-rd.

**London.**—Paving.—Providing and laying creosoted deal blocks on new concrete foundations in Kensington-rd., by the entrance to Earl's Court-rd., approximate area 250 sq. yds., Bayswater-rd. (Ormesq. to Palace-gate), approximate area 1,600 sq. yds., also providing and laying bituminous surfacing material and incidental works in portion of Kensington High-st. between Earls Court-rd. and the west side of Edwardes-sq. (approximate area 3,800 sq. yds.), for Kensington B.C. B.E. and S.

**London.**—Paving.—Supply and laying of creosoted deal paving blocks and asphalte macadam, for Lambeth B.C. O. Cattlin, B.E.

**Newton Abbot.**—Roads.—Surface dressing with "Colas," approximately 90,000 sq. yds. of roads, for U.D.C. S.

**Southwell.**—Making-up.—Of Walesby-lane, Ollerton, for R.D.C. Sands & Walker, engineers, Milton-chambers, Nottingham. Dep. £2 2s.

**Southwell.** — Tarspraying. — For R.D.C. R. Morris, Highway Surveyor, 8, Westgate.

**MARCH 8.**

**Bexhill.**—Making-up.—Of Clavering-walk (part), and Cranston-av. (part), for T.C. G. Ball, B.S. Dep. £1 1s.

**MARCH 9.**

**Caharciveen.**—Sewerage.—Construction of about 2,340 yds. of 9-in. diameter pipe sewers, about 1,220 yds. of 12-in. diameter pipe sewers, and about 150 yds. of 15-in. diameter pipe sewers of stoneware, or, alternatively, of concrete, of a 12-in. diameter cast-iron outfall sewer, of manholes, of c.i. ventilating columns, of storm overflows, and of connections to existing sewers and house connections, etc., for Kerry Board of Health. E. M. Murphy, consulting ngineer, 27, Molesworth-st., Dublin. Dep. £5 5s.

**Portslade-by-Sea.**—Roads.—Of roads and sewers on site on west side of Church-rd., for U.D.C. D. V. Howard, architect and surveyor. Dep. £2.

## Auction Sales, Tenders, etc.

**MARCH 4.**

***Islington.**—W. F. Mills will sell, at late Employment Exchange, corner of Wynyatt-st. and Goswell-rd., Islington. Unreserved sale of sectional huts, timber and building materials. Auctioneers, "Langsford," Forty-lane, Wembley Park.

**MARCH 6.**

**London.**—Daniel Smith Oakley & Garrard will sell, by order of the Westminster City Council, 139, Wardour-st and 17, Duck-lane, W.1, for letting by auction at the London Auction Mart, 155, Queen Victoria-st., E.C.4. Auctioneers, 4-5, Charles-st., St. James's-square, S.W.1.

**London.**—Daniel Smith Oakley & Garrard will offer sites 213-223 (odd), 225-235 (odd), Lewisham High-rd., on the Whidborne Estate, Deptford, S.E., for letting by auction at the London Auction Mart, 155, Queen Victoria-st., E.C.4. Auctioneers, 4-5, Charles-st., St. James's-square, S.W.1.

**MARCH 7.**

**London.**—Joseph Hibbard & Sons will sell upon the premises (by order of Messrs. Bernard Brock, Ltd., who are closing down business), Tower Pianoforte Factory, Northwold-rd., Clapton, E.5, plant and stock of pianoforte manufacturers, office furniture, etc. Auctioneers, 15, Newington Green, Islington, N.16.

**MARCH 12.**

**Kentish Town, N.W.5.**—Joseph Hibbard & Sons will sell, by order of the Imperial Organ and Piano Co., Ltd., who are removing to Camden Town, upon the premises, at Perren-street, Ryland-road, Saw Mill Plant and Machinery, Window Frames and quantity of Surplus Timber. Auctioneers, 15, Newington Green, Islington, N.16.

**MARCH 16.**

***Berks.**—Simmons and Sons will sell, at the Great Western Hotel, in two lots, by order of the Exors. of the late Mr. R. L. Cotterell, as a going concern. Sale of the lease of Ruscombe brickyard, including foreman's house, machinery, etc.; also an area of freehold building and accommodation land, known as "Twyford Field," with gravel pit. Auctioneers, Henley-on-Thames, Reading and Basingstoke.

## Public Appointments

**MARCH 4.**

**Bradford.**—Assistant Lecturer.—Required in the Dept. of Civil Engineering, Architecture and Building at the Technical College by the Bradford C.C. Dir. of Edn., Town Hall, Bradford.

**MARCH 6.**

***London.**—Technical Assistants (temporary) required in the Architect's Department. L.C.C. Architect, County Hall, Westminster Bridge, S.E.1.

**MARCH 7.**

**Greenwich.**—Male Supernumerary Clerk, in the Works Dept., required by the Metro. Boro. Council of Greenwich. Frederick J. Simpson, T.C., Town Hall, Greenwich, S.E.10.

**MARCH 9.**

**Essex.**—Quantity Surveyor required on the temporary staff of the County Architect's Dept., by the Essex C.C. Jno. Stuart, F.R.I.B.A., C.A., Old Court, Springfield, Chelmsford.

***Newcastle-upon-Tyne.** — Head of Building Department, from September 1, 1929, by the Newcastle-upon-Tyne Education Committee, at the Rutherford Technical College. Thos. Walling, Director of Education, Northumberland-rd., Newcastle-upon-Tyne.

**MARCH 18.**

***Bradford.**—Architectural Assistant in the City Architect's Department, by the Bradford City Council. City Architect, Town Hall, Bradford.

**APRIL 3, 4, 5.**

**London.—London Building Act, 1894.—District Surveyors at a London Centre, an examination of persons presenting themselves for the purpose of being examined for duties of District Surveyors Clerk of the Council, the County Hall, Westminster Bridge, S.E.1.**

# CONTRACTS PLACED

**Hastings.**—CHURCH.—Work has been commenced upon the erection of St. Saviour's, which is to replace the temporary edifice. The contract has been placed with Messrs. R. Cook & Sons, of Crawley, Sussex. The plans have been prepared by Mr. J. B. Mendham, F.R.I.B.A., 17, Dartmouth-street, Westminster, S.W.1.

**Tolworth.** — STORES. — The Woking Co-operative Society, Ltd., have decided to carry out the erection of a new branch showroom and shop. A contract for the work has been placed with Messrs. Holt & Sons, of Staines. The plans have been prepared by Messrs. Bethell, Swannell & Durnsford, architects, 16a, John-street, Adelphi, W.C.2.

# PROPOSED NEW BUILDINGS AND OTHER WORKS*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.G. for Board of Guardians; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education; M.A.B. for Metropolitan Asylums Board; and M.W.B. for Metropolitan Water Board; Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; County Architect, C.A.; Surveyor, S.; Engineer, E.; Borough Architect, B.A.; Architect, A.

**Acton.**—T.C. passed plans:—**P. W. Williams**, 242, High-st., Acton, W.3, architect, 6 **houses**, H. Wesley, Wesley-av.; G. P. Pratt, 174, High-st., Acton, W.3, architect, factory, 16, Chase estate, for P.I.V., Chain Gears, Ltd., Park Royal-rd.; H. Wesley, Acton-lane, N.W.10, 16, **houses**, Wesley-av.; J. Atherton & Co., Perryn-rd., Acton, W.3, builders, 38 houses and garage to each, Gibbon-rd., and 6 houses and garage to each, Bowes-rd.

**Annan.**—T.C. decided to obtain competitive plans from local architects for immediate erection of 24 houses, and the lay-out of 50 houses in all.

**Barking Town.**—Plans passed by U.D.C.:—Extension to factory, River-rd., for Acme Flooring & Paving Co. (1904), Ltd.; 6 houses, Longbridge-rd., for J. Clements; lock-up garages, Hertford-rd., for E. Baker; 41 houses, Faircross-estate, for E. B. Glenny; 7 houses, Morley-rd., for **J. P. Graffy.**

**Barnsley.**—Highways Committe of C.B. further considered question of widening of canal bridge in Cliffe-lane, and recommended that B.B. be instructed to proceed with work.

**Barnsley.**—Plans been passed by C.B. for F. W. Woolworth & Co., premises, Queen-st. and Eldon-st. —W. T. Turner, Westville-rd., is architect for chapel at Monk Bretton, for **Wesleyan Chapel** authorities.

**Belford.**—W. Tully & Sons, Belford, sent in plan for 15 houses proposed to be built at Seahouses, opposite Dunstan View, which R.D.C. approved.

**Bentley.**—West Riding C.C. to agree upon a site for a secondary school at Adwick Grange Farm.

**Birchington.**—Isle of Thanet R.D.C. are to seek sanction to borrow £80,000 for extension of Birchington sewerage scheme.

**Birmingham.**—Tenders to be invited for school in Marsh-lane, Upper Whitton, for E.C. Plans by J. Swan, F.R.I.B.A., 33, Paradise-st.

**Bradford.**—Parochial Council of Buttershaw St. Paul's Church under consideration erection of new edifice on Odsal Estate.

**Bradford.**—T.C. passed plans for houses:—J. Priestley, Hawes-drive, 8; T. E. Feather, Ile-rd., 8; C. Chambers, Hutton-rd., 12.

**Brandon.**—R.D.C. decided that architect prepare layout plan for 24 houses, estimated to cost £420 a-piece.

**Brentford.**—Parishioners of St. Paul's church decided to provide hall.

**Bromley.**—T.C. passed plans: 8 houses, The Avenue, H. F. Thoburn; 6 houses, Bishop's-av., Ecott, Widgery & Ecott.

**Burnham-on-Sea.**—U.D.C. have under consideration scheme by G. Pimm, for lake, at £10,000.

**Burnley.**—Board of Management of Victoria Hospital decided to erect a radium clinic for treatment of cancer, at £5,000.

**Burnley.**—T.C. passed plans:—Warehouse in March-st., R. Rawlinson & Sons; lay-out of Higher Saxifield estate, Briercliffe-rd., and plan of 6 houses, J. Faulkner; conveniences in Hope-st., Trafalgar Mill Co., Ltd.; extensions and alterations to Manchester and County Bank, Grimshaw-st., Manchester and County Bank, Ltd.

**Bury (Lancs).**—Corporation received sanction from M.H. to borrow £800 for purchase of land at Lower Chesham upon which 88 flats of the two bedroom type are to be erected.

**Bury.**—T.C. passed plans:—Greene, King & Sons, Ltd., 8, houses, Howton-rd.; F. R. Warren, 10 bungalows, Sicklesmere-rd.

**Cambridge.**—To increase their stores in Sidney-st. F. W. Woolworth & Co., Ltd., have purchased adjoining premises, 13, Sidney-st.

**Carlow.**—Mental Hospital Joint Committee of Management adopted plans for fitting of Kelvingrove residence as an adjunct of the main hospital at £8,000.

**Carrick-on-Suir.**—U.D.C. is to build twelve houses at £300 each.

**Chester.**—T.C. passed plans for rebuilding of Northgate Arms, Victoria-rd., for Chester Northgate Brewery Co., Ltd.

**Chesterfield.**—Members of St. Mary's Schools proposing to erect new schools. Plans by C. A. Edeson, "Killinagh," Berry Hill-lane, Nottingham-rd., Mansfield.—Jackson & Fryer, architects, 6, Stephenson-pl., preparing plans for buildings for Victoria Enterprises, Ltd.

* See also our List of Contracts, Competitions, etc.

**Cleckheaton.**—R. Castle & Son, architects and surveyors, Midland Bank-chambers, Cleckheaton, preparing plans for additions to Wharf Works, Westgate, for P. Garnett, Ltd.

**Doncaster.**—Company been formed which will be known as Doncaster Conservative and Unionist Association, Ltd., have acquired central site in Silver-st., on which it is proposed to erect new building.—Members of St. Mary's raising funds for school building.—J. Haslam, architect and surveyor, Bridge-st., Worksop, preparing plans for licensed premises in Melton-rd., Sprotborough.—Doncaster Divisional Labour Party raising funds for new headquarters.

**Doncaster.**—T.C. approved scheme for erection of further 220 houses on Intake site.—For erection of new elementary school on Tickhill-rd. site, Council accepted plans of Walker & Thompson, estimated cost of the scheme being £28,524. Plans of Athron & Dyson for the Intake elementary school, to accommodate 300 infants and 250 junior mixed children, approved.

**Dublin.**—Following plans for new buildings and works of reconstruction been passed by H. T. O'Rourke, City Architect:—Kincora-rd., 8 houses, Mr. Madden; Inchicore, additions to Church of Oblates.

**East Barnet.**—Council passed plans:—8 houses in Ryhope-rd., for J. M. Webster; 10 houses in Ryhope-rd. for Carr & Son; addition to factory in Cromer-rd. for S. Maw & Sons.

**Eccington.**—U.D.C. propose to erect mortuary.

**Edmonton.**—U.D.C. passed plans: C. H. Knight, 5 houses, First-av., Bush Hill-park; Stanley Parkes and Brown, 6 houses and garages, Ranworth-rd. Howis and Belcham, 12 houses, Montagu-rd.

**Farnham.**—Surrey E.C. decided to extend Girls' Grammar school by erection of two school rooms. Jarvis & Richards, FF.R.I.B.A., architects, 60, Tufton-st., Westminster, S.W.1.

**Hassocks.**—Governors of Lancing College under consideration plans for addition to school chapel. Sir George Oatley, architect, of Messrs. Oatley & Lawrence, of Orchard-st., Bristol.

**High Wycombe.**—T.C. passed plans: Extension to factory, Grafton-st., for Bartlett & Son; factory, Amersham-hill, for Lord Bros.

**Horwich.**—Lancashire Elementary Education Sub-committee propose building council school at £24,500.

**Hythe.**—Council passed plans for several houses on Dymchurch-rd., and is also considering comprehensive town-planning scheme in conjunction with other adjoining local authorities.

**Ipswich.**—Revised plans been submitted to M.H. for extensions to infirmary, for B.G. Cost £20,000. J. A. Sherman, architect, 9, Northgate.

**Keighley.**—Aaron King & Co., brewers, Cookelane, proposing to erect licensed premises at junction of Harden-rd. and Keighley-rd. Plans by F. Atkinson, L.R.I.B.A., Bank-chambers, Bingley.

**Kettering.**—U.D.C. received Ministry's approval to erection of 38 non-parlour type houses on Avondale-rd. site by direct labour.

**Leamington Spa.**—T.C. passed plans:—20 houses, Radford-rd., for C. Anelay & Son; 10 houses, Wathen-rd., for A. Parker.

**Leicester.**—Housing Committee intend to build 750 more houses at Braunstone.

**Letchworth.**—Hertfordshire E.C. approved plans for secondary school, which will provide accommodation for 300 scholars, at £46,000. Barry Parker, F.R.I.B.A., architect, Norton Wat.

**Letchworth.**—U.D.C. passed plans for J. L. A. White, 8 houses, Icknield Way-west.

**Lincoln.**—Been decided to proceed with extension of boiler house, engine room, etc., at Bracebridge Mental Hospital, at £13,000.

**Liverpool.**—T.C. received formal consent of M.H. to borrowing of £162,150 for purchase of approximately 1,726 acres of land, comprising part of the Speke Estate.—Application is to be made to M.H. for sanction to borrow following:—£5,618 in respect of adaptation and furnishing of Stone House as hostel for F. L. Calder College section of the City Technical School for Women; £32,015, erection and furnishing of the Ranworth-sq. (junior boys' and junior girls') Permanent Council school; and £31,789, erection and furnishing of the Evered-av. Central school.—Council also recommend that revised plans prepared by Land Steward and Surveyor for reconstruction of the Earle-rd. and Lawrence-rd. Council schools be adopted.—Sketch-plans prepared by Land Steward and Surveyor for alterations to "Sandheys," for purpose of a Junior Girls' School in connection with Holly Lodge High School, been adopted, and forwarded to B. of E. for approval.

**London (Battersea).**—B.C. are to acquire site in Battersea for housing purposes, at £1,000.

**London (Greenwich).**—L.C.C. recommend borrowing by B.C. of £3,688 for housing purposes.

**London (Hackney).**—L.C.C. recommend £1,898 submitted by Finance Committee in respect of structural improvements at North Hackney central and Millfields-rd. L.C.C. schools be approved.

**London (Hackney).**—B.C. passed plans W. H. T. Kelland & Sons, Ltd., lock-up garages at rear of 47a, Stamford Hill; J. Sainsbury, Ltd., shop premises, 392, Mare-st.; C. A. Aish, extension to Mentmore Manufacturing Company's premises, Tudor-grove.

**London (Kensington).**—L.C.C. recommend £856 for metalwork centre at North Kensington central school.

**London (Lewisham).**—B.C. passed plans for Burnard & Pickett, Ltd., High-st., Lewisham, build and drain an addition to Lewisham Hospital.

**London (Shoreditch).**—L.C.C. recommend £3,137 for demolition of schoolkeeper's house, erection of schoolkeeper's quarters, metalwork centre, kitchen and a dining room, the incorporation of additional land, and the provision of a new entrance, draining and fencing, at Shoreditch L.C.C. central school.

**London (Wandsworth).**—Plans passed by B.C.: Pitcher Construction Co., Ltd., dance hall, Streatham-hill, near its junction with Sternhold-av., Streatham, Goodley & James; 5 houses, Briarwood-rd., Clapham South; by Mr. H. Pacey, for Pitcher Construction Co., theatre, Streatham-hill.

**Longford.**—Sean Connolly Military Barracks is to be converted into technical school at £500.

**Lowestoft.**—Electricity Commissioners forwarded formal sanction to borrowing by T.C. of £2,900 for building extensions and provision of additional plant foundations at Electricity Works.

**Lytham St. Annes.**—Councillor A. J. Price, architect, 14, Park-rd., is preparing plans for headquarters for section of St. John Ambulance Brigade and Nursing Division.

**Maidstone.**—Pencil drawings been submitted by S. of R.D.C. for additions to scarlet fever block at Isolation Hospital, and also of a new building for sleeping quarters for nurses, including a waiting room. Estimated cost is £1,200 for the scarlet fever block, and £1,000 for the new nurses' quarters, etc.

**Manchester.**—H. S. Fairhurst, F.R.I.B.A., architect, 55, Brown-st., Manchester, prepared plans for additions to Granby House, Granby-row, for Oxendale & Co., Ltd.

**Manchester.**—Joseph Rank, Ltd., millers, Baltic House, Leadenhall-st., London, E.C.3, proposing to erect engine house at branch at Canal Flour Mills, Egerton-st., Hulme.—Rev. Canon Rowntree, St. Cuthbert's, Withington, is proposing to make enlargement of schools. Plans by W. Telford Gunson & Son, architects, 10, Marsden-st.—Hill & Son, builders, Hilton-rd., Pendleton, proposing to develop a site off Lancaster-rd., Pendleton, for houses.

**Manchester.**—J. Eades, consulting engineer, 17, St. Ann's-sq., has scheme on hand for dairy at rear of existing premises, 115, Mauldeth-rd. and Talbot-rd., Withington, for C. White.

**Melton Mowbray.**—Definite step forward been taken in conection with extension scheme of War Memorial Hospital. Plans been submitted for erection of entirely new hospital adjoining present building. First section of proposed building will cost £14,000.

**Mexborough.**—Dyson, Cawthorne & Coles, architects and surveyors, 10, Regent-st., Barnsley, preparing plans for licensed premises in Hall-av. and Harlington-lane, for F. E. Hall.

**Middlesex.**—Factory and garage is to be built on site opposite the new Firestone Tyre Works, Gt. West-rd., by W. C. Gaunt Co., the Packard car concessionaires, of 198, Piccadilly, W.1, who propose to carry out service and repair work in new buildings. Plans by Wallis Gilbert & Partners, consulting engineers and architects, 29, Roland-gardens, South Kensington, S.W.7.

**Middleton.**—Burton Percival & Lever, architects and surveyors, 150a, Stamford-st., Ashton-under-Lyne, preparing plans for rebuilding of "Barber's Arms" public-house at Rhodes, and also "Grapes" Inn, Old Hall-st.

**Nantwich.**—Plans being prepared for rebuilding of Town Hall.

**Newport (Mon).**—C.B. passed plans for 70-76, Tennyson-rd., 6 houses, J. G. Dowden, Chepstow-rd.

**Newry.**—U.D.C. is to borrow £12,000 for purpose of converting military barracks into 72 workers' houses.

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**Nottingham.**—Governors of St. Mary's Schools, College-st., proposing to carry extensions to schools in form of additional classroom for accommodation of children. Plans by F. Parkin, architect, 5, Sherwood-rise.

**Plymouth.**—City Council received M.H. sanction to borrow £1,504 for additional accommodation, Tinside Bathing-pl.—Plans passed:—G. H. Webber, 4 houses and shops, Pennycross-st.; W. Andrews, 3 houses, North Down-rd.; E. J. Morrish, 2 houses, Burnham Park-rd.; F. Westcott, 6 bungalows in street off North Down-rd.; R. H. Roberts, 6 houses, Dale-gardens; Stoke Ideal Estate, Ltd., 38 houses on Stoke Ideal Estate, Trafalgar-rd., Stoke; W. G. Heath, 2 flats and 12 lock-up garages, Cliff-rd.

**Portrush.**—U.D.C. decided to erect a hall for excursion parties at £2,000.

**Preston.**—R.C. authorities obtained site at Fishwick for church.

**Ripon.**—Victoria Nursing Institution decided to build a maternity ward.

**Rochford.**—R.D.C. are to purchase site at Little Wakering for erection of eight houses, and instructed S. to make inquiries for site for additional eight houses at Rawreth.

**Rotherham.**—Corporation's application to M.H. for sanction to borrow £16,000 towards cost of new Central Library, to be erected in Howard-st., been subject of inquiry.

**Rothwell.**—U.D.C. are to make application to M.H. for approval of erection of 12 more houses, and C. D. Rochester, architect, is to prepare plans.

**Sheffield.**—Duncan Gillmore & Co., Ltd., brewers, propose new licensed premises on the site of the Banner Cross Hotel and the adjacent property at 967 and 969, Ecclesall-rd

**Sheffield.**—H. H. Ward & Co., Ltd., brewers, propose new licensed premises on the site in Prince of Wales-rd.

**Shepshed.**—Application is to be made by U.D.C. to M.H. for loan of £800 to further develop Oxford-st. building site.

**Shipley.**—U.D.C. authorised application to the Ministry for sanction to borrowing of £37,338 for 109 houses on Saltaire estate.

**Solihull.**—R.D.C. decided to apply to M.H. for provisional approval to erect a further 50 non-parlour type of houses.

**Southampton.**—Old cinema in East-st. is to be converted into shops and showrooms, involving complete reconstruction. Plans by North, Robin & Wilsdon, FF.R.I.B.A., Townsend House, Greycoat-place, S.W.1.

**Sowerby Bridge.**—U.D.C. approved plans for erection of 4 houses at Friendly, by T. Taylor.

**Soyland.**—U.D.C. approved plans for warehouse for Ripponden and District Farmers' Association.

**St. Anne's-on-Sea.**—Board of Management of the St. Anne's War Memorial Hospital, St. Anne's-rd. East, proposing to make extensions by building large ward.

**Stourbridge.**—Gymnasium at the King Edward Grammar school, at £1,050.

**Sunbury-on-Thames.**—Middlesex C.C. decided to erect school for 500 children.

**Taunton.**—T.C. approved plans by F. C. Spear, Ltd., for 18 houses near Cheddon-rd.

**Tiverton.**—Scheme is on foot for hospital, at £30,000.

**Torquay.**—Two large hotels are in the course of erection on the Torquay sea front. They will each have 80 bedrooms.—Endeavours are being made to find a suitable site for an aerodrome.—Scheme for extensive illumination of sea front is being considered by T.C.

**Tyrone.**—C.C. proposes to spend £3,000 on erection of a new bridge at Burndinnett, on Strabane-Derry-rd.

**Wakefield.**—Scheme being considered for Labour Institute in Horbury.

**Wallsend.**—T.C passed plans for proposed hotel at junction of Coast-rd. and King's-rd., for Calder (Newcastle), Ltd.

**Waltham Cross.**—Biss Bros., builders, purchased property in High-st and land in Eleanor-rd. for 50 houses.

**Wigan.**—Corporation proposing to erect school in Leader-st., at £18,000. Also decided to carry out extension to Grammar School, at £40,000, and to erect Central School in Gidlow District, at £25,000. Public baths for Pemberton area also under consideration.

**Wigston.**—U.D.C. are to purchase 10 acres of land on Aylestone-lane, Wigston Magna, and, subject to approval of M.H., apply for tenders to develop land as new housing estate.

**Wombwell.**—West Riding C.C. propose to erect open-air school to accommodate 64 tuberculous children, at £2,700. Plans by County Architect, H. Wormald, A.R.I.B.A., County Hall, Wakefield.

**Wood Green.**—U.D.C. instructed clerk to make application to M.H. for sanction to borrowing of £3,412 for erecting six flats for firemen, on land adjoining Central fire station.—Plans passed: Norfolk-av., 14 houses and 3 garages, C. F. Matthews.

**Yarmouth.**—Lacon & Co., Ltd., obtained from T.C. 1,550 sq. yds. of ground surrounding pumping station on the North Denes for purpose of a licensed house.—For concrete standing accommodation on west side of Wellesley Recreation Ground 100 yds. long and 3 yds. wide, £200 is to be included in next estimates.

**A Correction.**

We are asked to state that the address of Mr. John Batty, A.R.I.B.A., is 142/3, Minories, E.1, and not 51, Swinburne-road, as given in the list of tenders for New Colour Factories, Acton, W., on page 321 of our February 8 issue.

# PRICES CURRENT OF MATERIALS.*

**Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.**

## BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

| | £ s. d. |
|---|---|
| Best Stocks | 4 5 6 |
| Second Hard Stocks | 3 19 6 |

Per 1,000. Delivered at London Goods Stations.

| | £ s. d. | | £ s. d. |
|---|---|---|---|
| Fletton, at King's Cross | 2 12 3 | Best Blue Pressed Staffs | 9 5 0 |
| Do., grooved for Plaster | 2 14 3 | Do. Bullnose | 9 15 0 |
| Do., Bullnose | 3 7 3 | Blue Wire Cuts | 7 5 0 |

Best Stourbridge Fire Brick :—
2½ in. ..... 8 11 0 3 in. ..... 10 3 0

GLAZED BRICKS—

| | | | |
|---|---|---|---|
| Best White Ivory, and Salt Glazed Stretchers | 21 0 0 | D'ble Str'tch'rs | 29 10 0 |
| | | D'ble Headers | 26 10 0 |
| Headers | 20 10 0 | One Side and two Ends | 30 10 0 |
| Quoins, Bull-nose and 4½ in. Flats | 27 10 0 | Two Sides and one End | 31 10 0 |
| | | Splays, and Squints | 28 0 0 |

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS
Delivered London

| | s. d. | | s. d. |
|---|---|---|---|
| 2 in. per yd. super. | 1 11 | 3 in per yd. super | 2 9 |
| 2½ in. ,, ,, | 2 4 | 4 in. ,, ,, | 3 6 |

| | s. d. | |
|---|---|---|
| Thames Ballast | 9 9 per yd. | delivered 2 miles radius Paddington. |
| Pit Sand | 12 0 ,, ,, | |
| Thames Sand | 12 6 ,, ,, | |
| Best Washed Sand | 12 6 ,, ,, | |
| ¾ in. Shingle for Ferro-Concrete | 12 0 ,, ,, | |
| ½ in. | 12 6 ,, ,, | |
| ¼ in. Broken Brick | 11 6 ,, ,, | |
| Pan Breeze | 8 0 ,, ,, | |

Per ton delivered in London area in full van loads.
Best Portland Cement. British. Standard Specification. Test £2 6 0 to £2 8 0 30s. alongside at Vauxhall in 80-ton lots.

| | £ s. d. |
|---|---|
| Ferrocrete per ton extra on above | 0 7 6 |
| Super Cement (Waterproof) | 3 16 0 |
| Roman Cement | 8 15 0 |
| Parian Cement | 5 15 0 |
| Keene's Cement, White | 5 15 0 |
| ,, ,, Pink | 5 10 0 |
| Finster, Coarse, Pink | 3 0 0 |
| ,, ,, White | 3 12 6 |
| ,, ,, Fine | 5 12 0 |
| Sirapite, Coarse | 3 9 0 |
| ,, Finish | 3 17 0 |
| Grey Stone Lime | 2 10 9 |
| Chalk Lime | 2 10 9 |
| Best Ground Blue Lias Lime | 1 17 6 |
| Hair | per cwt. 2 2 6 |
| Granite Chippings | 1 12 0 |

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months carr. pd.
Stourbridge Fireclay in s'cks 37s. 0d. per ton at rly. dp.

## STONE.

BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube ..... s. d. 2 10

BEER STONE—RANDOM BLOCK—
Free on rail at Seaton Station per ft. cube 2 3
Delivered free on rail Nine Elms, S.R. per ft. cube 3 1½
Selected approximate size one way, 1d. per cubic foot extra; selected approximately three sizes or for special work, 3d. per cubic foot extra.

PORTLAND STONE—
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube ..... 4 4½
Do. do. delivered on road wagons at above stations, per ft. cube ..... 4 5½
White basebed, 3d. per ft. cube extra.
NOTE.—1d. per ft. cube extra for every foot over 20 ft *average*, and ½d. beyond 30 ft.

HOPTON-WOOD STONE.—
Delivered at any Goods Station, London. s. d.
Random blocks from 10 ft. and over P. ft. cb. 14 0
Sawn two sides ,, 22 6
Sawn three or four sides ,, 27 6

YORK STONE, BLUE—*Robin Hood Quality.*
Delivered at any Goods Station, London.
6 in. sawn two sides landings to sizes (under 30 ft. super) ..... Per ft. super 5 6
6 in. rubbed two sides, ditto ..... ,, 6 0
2 in. sawn two sides slabs (random sizes) ,, 2 3½
2 in. to 2½ in. sawn one side slabs (random sizes) ..... ,, 1 6½
1½ in. to 2 in. ditto, ditto ..... ,, 1 3½

HARD YORK—
Delivered at any Goods Station, London.
Scappled random blocks ..... Per ft. cube 6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) ..... Per ft. super 5 1½
6 in. rubbed two sides, ditto ..... ,, 6 1½
4 in. sawn two sides slabs (random sizes) ,, 2 1½
3 in. ditto ditto ,, 2 10
2 in. self-faced random flags ..... Per yd. super 8 6

## CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 8s. 6d.; Moulded, 9s. 6d.; Cills, 10s. 0d.

## WOOD.

GOOD BUILDING DEALS

| Inches. | per stan. | Inches. | per stan. |
|---|---|---|---|
| 4 × 11 | £30 0 | 3 × 6 | £21 0 |
| 4 × 9 | 26 0 | 3 × 11 | 25 0 |
| 4 × 8 | 25 0 | 2 × 11 | 26 0 |
| 4 × 7 | 23 0 | 3 × 9 | 24 0 |
| 3 × 8 | 22 0 | 2½ × 9 | 24 0 |
| 3 × 7 | 22 0 | 3 × 4½ | 21 0 |
| 2½ × 7 | 21 0 | 3 × 4 | 21 0 |

PLANED BOARDS.

| | | | |
|---|---|---|---|
| 1 × 11 | £30 0 | 1 × 9 | £28 0 |

PLAIN EDGE FLOORING

| Inches. | per sq. | Inches. | per sq. |
|---|---|---|---|
| ⅜ | 18/- | 1¼ | 30/- |
| ½ | 21/- | 1½ | 34/- |
| 1 | 24/- | | |

TONGUED AND GROOVED FLOORING

| Inches. | per sq. |
|---|---|
| 1 | 24/- |
| 1¼ | 30/- |
| 1½ | 34/- |

| Ins. | BATTENS. | s. d. |
|---|---|---|
| ¾ × 2 | per 100 ft. | 2 6 |

MATCHING (BEST).

| Inches. | per sq. |
|---|---|
| ⅜ | 16/6 |
| ½ | 19/- |
| 1 | 24/- |

SAWN LATHS. s. d.
Per bundle ..... 2 6
1" AND UP THICK.

| | £ s. d. | £ s. d. |
|---|---|---|
| Dry Austrian Wainscot, per ft. cube | 0 16 0 | to 0 18 0 |
| Dry American and/or Japanese Figured Oak, ft. cube | 0 14 0 | to 0 15 0 |
| Dry American and/or Japanese Plain Oak, ft. cube | 0 10 0 | to 0 13 0 |
| Dry sq. edged Honduras Mahogany, ft. cube | 0 15 0 | to 0 18 0 |
| Dry Log cut Honduras Mahogany, ft. cube | 0 16 0 | to 1 1 0 |
| Dry Cuba Mahogany, ft. cube | 1 1 0 | to 1 10 0 |
| Dry Teak, ft. cube | 0 13 0 | to 0 15 0 |
| Dry American Whitewood, ft. cube | 0 10 0 | to 0 14 0 |
| Best Scotch Glue, per cwt. | 4 10 0 | to — |
| Liquid Glue, per cwt. | 4 7 0 | to 5 10 0 |

## SLATES.

First quality slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000.

| | £ s. d. | | £ s. d. |
|---|---|---|---|
| 24 by 12 | 32 18 4 | 18 by 10 | 18 12 11 |
| 22 by 12 | 29 17 11 | 18 by 9 | 16 9 2 |
| 22 by 11 | 27 14 2 | 16 by 10 | 15 12 6 |
| 20 by 12 | 26 5 0 | 16 by 8 | 12 3 9 |
| 20 by 10 | 22 10 0 | | |

## TILES.

Delivered at London rate stations in full truckloads of not less than 6 tons. Per 1,000. f.o.r. London.

| | £ s. d. |
|---|---|
| Best machine-made tiles from Broseley or Staffordshire district | 5 7 6 |
| ditto hand-made ditto | 5 17 6 |
| Ornamental ditto | 6 2 6 |
| Hip and valley tiles (per dozen) { Hand-made | 0 9 6 |
| { Machine-made | 0 9 0 |

## METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—

| | £ s. d. |
|---|---|
| R.S. Joists, cut and fitted | 12 10 0 |
| Plain Compound Girders | 14 10 0 |
| ,, ,, Stanchions | 16 10 0 |
| In Roof Work | 19 10 0 |

MILD STEEL ROUNDS.—To London Station, per ton

| Diameter. | £ s. d. | Diameter. | £ s. d. |
|---|---|---|---|
| ½ in. | 12 0 0 | ⅝ in. to ¾ in. | 10 15 0 |
| ⅜ in. | 11 0 0 | ⅞ in. to 2¾ in. | 10 10 0 |

WROUGHT-IRON TUBES AND FITTINGS—
(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

| | Tubes. Wrought Mild Steel. | Tubes. Genuine Staffs. Iron. | Fittings. ½ in. and under. | Fittings. Over ½ in. | Flanges. ½ in. and under. | Flanges. Over ½ in. |
|---|---|---|---|---|---|---|
| | % | % | % | % | % | % |
| Gas | 67½ | 50 | 42½ | 45 | 52½ | 55 |
| Water | 63½ | 46½ | 37½ | 40 | 47½ | 50 |
| Steam | 60 | 42½ | 32½ | 35 | 42½ | 45 |
| Galv. gas | 55 | 37½ | 32½ | 35 | 42½ | 45 |
| Galv. water | 50 | 32½ | 27½ | 30 | 37½ | 40 |
| Galv. steam | 45 | 27½ | 22½ | 25 | 32½ | 35 |

C.I.—HALF-ROUND GUTTERS—London Prices ex Works

| Per yd. in 6 ft. lengths. | Gutters. | Angles and Nozzles. | Stop Ends. |
|---|---|---|---|
| 3 in. | 1/3½ | 11½d. | 3½d. |
| 3½ in. | 1/4½ | 1/1½ | 3½d. |
| 4 in. | 1/6 | 1/3 | 3½d. |
| 4½ in. | 1/7½ | 1/4½ | 4½d. |
| 5 in. | 1/10½ | 1/6½ | 5½d. |

O.G. GUTTERS.

| | | | |
|---|---|---|---|
| 3 in. | 1/8 | 1/4½ | 3½d. |
| 3½ in. | 1/8 | 1/4½ | 3½d. |
| 4 in. | 1/9½ | 1/4½ | 3½d. |
| 4½ in. | 1/11½ | 1/7½ | 4½d. |
| 5 in. | 2/4½ | 1/10½ | 5½d. |

RAIN-WATER PIPES, &c.

| Per yd. in 6 ft. | Pipe. | Bends, stock Branches, angles. | stock angles. |
|---|---|---|---|
| 2 in. plain | 1/10½ | 1/3 | 1/9½ |
| 2½ in. ,, | 2/0½ | 1/4½ | 2/1½ |
| 3 in. ,, | 2/6 | 1/9 | 2/7½ |
| 3½ in. ,, | 2/11½ | 2/0½ | 3/0½ |
| 4 in. ,, | 3/5 | 2/6½ | 3/8½ |

L.C.C. COATED SOIL PIPES—London Prices ex Works.

| | Bends, stock Branches, Pipe. angles. | stock angles. |
|---|---|---|
| | s. d. | s. d. |
| 2 in. per yd. in 6 fts. plain | 3 2 | 2 4½ | 2 10 |
| 2½ in. ,, | 3 9 | 2 7½ | 3 7 |
| 3 in. ,, | 4 6 | 2 10 | 4 2½ |
| 3½ in. ,, | 4 11½ | 3 7 | 4 11½ |
| 4 in. | 5 5½ | 4 0½ | 5 9 |

L.C.C. COATED DRAIN PIPES—London Price ex Works Bends, stock Branches, Pipe, angles, stock angles.

| | s. d. | s. d. | s. d. |
|---|---|---|---|
| 3 in. per yd. in 9ft. lengths | 4 4 | 5 1 | 8 0½ |
| 4 in. ,, ,, | 4 10 | 5 8 | 10 0 |
| 5 in. ,, ,, | 6 6 | 10 10 | 17 1 |
| 6 in. ,, ,, | 6 8 | 13 2 | 21 9 |

Gasken for jointing, 38/6 per cwt.

| IRON— | Per ton in London. £ s. d. | | £ s. d. |
|---|---|---|---|
| Common bars | 11 0 0 | to | 12 0 0 |
| Staffordshire Crown Bars—Good merchant quality | 11 10 0 | to | 12 10 0 |
| Staffordshire Marked Bars | 14 0 0 | ... | 15 0 0 |
| Mild Steel Bars | 10 0 0 | ... | 11 0 0 |
| Steel Bars, Ferro-Concrete quality, basis price | 10 0 0 | ... | 11 0 0 |
| Hoop iron, basis price | 11 10 0 | ... | 12 10 0 |
| ,, Galvanised | 27 0 0 | ... | 28 0 0 |
| Soft Steel Sheets, Black—Ordinary sizes, to 20 g. | 13 0 0 | ... | 14 0 0 |
| ,, ,, ,, 24 g. | 14 0 0 | ... | 15 0 0 |
| ,, ,, ,, 26 g. | 16 0 0 | ... | 17 0 0 |
| Sheets Flat Best Soft Steel, C.R. and C.A quality—Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g. | 15 0 0 | ... | 16 0 0 |
| Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g. | 16 0 0 | ... | 17 0 0 |
| Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g. | 18 0 0 | ... | 20 0 0 |

No. 1 quality £4 per ton extra.

| Flat and Galvanised Corrugated Sheets— | | | |
|---|---|---|---|
| Ordinary sizes, 6 ft. to 9 ft. to 20 g. | 16 10 0 | ... | 17 0 0 |
| Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g. | 17 0 0 | ... | 18 0 0 |
| Ordinary sizes, 6 ft. to 9 ft. to 26 g. | 20 0 0 | ... | 21 0 0 |
| Sheets Galvanised Flat, Best quality—Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker | 21 0 0 | ... | 22 0 0 |
| Best Soft Steel Sheets, 22 g. and 24 g. | 23 0 0 | ... | 25 0 0 |
| Best Soft Steel Sheets, 26 g. | 24 10 0 | ... | 25 10 0 |
| Cut Nails, 3 in. to 6 in. | 18 0 0 | | |

(Under 3 in. usual trade extras.)

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

## LEAD, &c.

| (Delivered in London.) | £ s. d. |
|---|---|
| LEAD—Sheet, English, 4 lb. and up | 30 10 0 |
| Pipe in coils | 31 0 0 |
| Soil pipe | 34 0 0 |
| Compo pipe | 35 0 0 |
| Old lead, ex London area, at Mills ..... per ton | 20 15 0 |

NOTE.—Country delivery, 20s. per ton extra; lots under 3 cwt. 3s. per cwt. extra, and over 3 cwt. and under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 5s. cwt. extra.

## COPPER.

| | | s. d. |
|---|---|---|
| Seamless Copper tubes (basis) | per lb. | 1 1½ |
| Strong sheet | ,, | 1 0 |
| Thin | ,, | 1 1 |
| Copper nails | ,, | 2 3 |
| Copper wire | ,, | 2 4 |

PLUMBERS' BRASS WORK.
Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.
½ in. ¾ in. 1 in. 1¼ in. 1½ in. 2 in.
29/- 45/- 76/- 153/- 246/- 510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.
½ in. ¾ in. 1 in. 1¼ in. 1½ in. 2 in.
41/6 62/- 92/- 174/- 300/- 588/- per doz.

RIVER PATTERN SCREW DOWN MAIN FERRULES.
½ in. ¾ in. 1 in.
39/6 60/- 116/6 per doz.

CAPS AND SCREWS.
1¼ in. 1½ in. 2 in. 3 in. 3½ in. 4 in.
7/6 10/- 14/- 23/- 30/- 42/- per doz.

DOUBLE NUT BOILER SCREWS.
½ in. ¾ in. 1 in. 1¼ in. 1½ in. 2 in.
7/6 11/- 17/- 29/- 36/- 63/- per doz.

BRASS SLEEVES.
1½ in. 2 in. 3 in. 3½ in. 4 in.
10/- 12/- 20/- 24/- 31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES, S.F.
½ in. ¾ in. 1 in. 1¼ in. 1½ in.
35/- 56/- 98/- 162/- 228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.
1½ in. 1½ in. 2 in. 3 in.
8 lbs. P. traps ... 33/- 41/- 56/- 101/- per doz.
8 lbs. S. traps ... 35/- 45/- 66/- 126/- ,,

TIN.—English Ingots, 2/6 per lb. SOLDER.—Plumber's 1/1. Tinmen's 1/4, Blowpipe 1/5 per lb.

## PAINTS, &c.

| | | | s. d. |
|---|---|---|---|
| Raw Linseed Oil, in pipes ..... | per gallon | 0 | 2 9 |
| ,, ,, ,, in barrels ... | ,, | 0 | 2 11 |
| ,, ,, ,, in drums ... | ,, | 0 | 3 1 |
| Boiled ,, ,, in barrels ... | ,, | 0 | 3 1 |
| ,, ,, ,, in drums ... | ,, | 0 | 3 4 |
| Turpentine in barrels ..... | ,, | 0 | 4 2 |
| ,, in drums (10 galls) | ,, | 0 | 4 4 |
| Genuine Ground English White Lead, per ton | | 53 | 0 0 |

(In not less than 5-cwt. casks.)
Extra for 1-cwt. kegs over 5-cwt. casks is 5/9 cwt.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

## PRICES CURRENT OF MATERIALS (*contd.*)

### PAINTS, &c. (*contd.*)

GENUINE WHITE LEAD PAINT.

| | £ s. d. |
|---|---|
| "Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J." Brand, and other best brands (in 14 lb. tins) not less than 5 cwt. lots .. per ton delivered | 70 10 0 |
| Red Lead, Dry (packages extra) .. per ton | 39 10 0 |
| Best Linseed Oil Putty ..... per cwt. | 0 15 0 |
| Filliol ..... " | 0 15 6 |
| Size. XD quality ..... ftn. | 0 3 6 |

### GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

| | Per ft. | | Per ft. |
|---|---|---|---|
| 15 oz. fourths .. | 2½d. | 32 oz. fourths ..... | 6¾d. |
| 15 ,, thirds .. | 3½d. | 32 ,, thirds ..... | 8¾d. |
| 21 ,, fourths .. | 3½d. | Obscured Sheet, 15 oz. | 3½d. |
| 21 ,, thirds .. | 4d. | 21 ,, | 4½d. |
| 26 ,, fourths .. | 4d. | Fluted, 15oz. 6½d., 21oz. | 9d. |
| 26 ,, thirds .. | 6½d. | En'lled, 15 oz. 4½d., 21oz. | 6d. |

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED plate in CRATES OF STOCK SIZES.

| | Per ft. |
|---|---|
| ⅛ Rolled plate ..... | 4½d. |
| ¼ Rough rolled ..... | 5½d. |
| ¼ Rough rolled ..... | 5¸d. |
| Figured Rolled, Baltic, Oceanic, Arctic Stippolyte, and small and large Flemish White .. | 5½d. |
| Ditto, tinted ..... | 8½d. |
| Rolled Sheet ..... | 4½d. |
| White Rolled Cathedral ..... | 4½d. |
| Tinted do. ..... | 6½d. |

Cast plate is same price as rough rolled.

### VARNISHES, &c.

| | | Per Gallon. £ s. d. |
|---|---|---|
| Oak Varnish ..... | Outside | 0 14 0 |
| Fine ditto ..... | ditto | 0 16 0 |
| Fine Copal ..... | ditto | 0 18 0 |
| Pale Copal ..... | ditto | 1 0 0 |
| Pale Copal Carriage ..... | ditto | 1 4 0 |
| Best ditto ..... | ditto | 1 12 0 |
| Floor Varnish ..... | Inside | 0 18 0 |
| Fine Pale Paper ..... | ditto | 0 18 0 |
| Fine Copal Cabinet ..... | ditto | 1 2 6 |
| Fine Copal Flatting ..... | ditto | 1 0 6 |
| Hard Drying Oak ..... | ditto | 0 18 0 |
| Fine Hard Drying Oak ..... | ditto | 0 19 0 |
| Fine Copal Varnish ..... | ditto | 1 0 0 |
| Pale ditto ..... | ditto | 1 2 0 |
| Best ditto ..... | ditto | 1 12 0 |
| Best Japan Gold Size ..... | | 0 12 6 |
| Best Black Japan ..... | | 0 10 6 |
| Oak and Mahogany Stain (water) ..... | | 0 12 0 |
| Brunswick Black ..... | | 0 7 6 |
| Berlin Black ..... | | 0 14 0 |
| Knotting (patent) ..... | | 1 5 0 |
| French and Brush Polish ..... | | 0 17 0 |
| Liquid Dryers in Terebine ..... | | 0 9 0 |
| Cuirass Black Enamel ..... | | 0 7 6 |

## NEW CINEMAS

**Chester.**—Mr. W. G. R. Saunders, solicitor, has submitted to the Chester City Council, on behalf of the Provincial Cinematograph Theatres, Ltd., plans of a cinema proposed to be erected on a site adjoining Brook-street.

**Slough.**—Messrs. H. D. Bowyer, of Slough, have been awarded a £38,478 contract for the erection of the proposed Adelphi Theatre, in the Bath-road. The architect is Mr. E. Norman Bailey, of 66, High-street, Maidenhead; and quantities have been taken out by Mr. A. B. Russell Taylor, 48, Baker-street, W.1. The scheme was announced in our columns for November 23.

**Victoria.**—Messrs. MacLaughlin & Harvey, Ltd., 24, Highbury-grove, N.5, who commenced upon the construction of the foundations of the new cinema in Vauxhall Bridge-road and Wilton-road, S.W.1, in August last year, have been given the contract for the superstructure of the building. The cinema, which is being built for the Provincial Cinematograph Theatres, Ltd., 123, Regent-street, W.1, to the plans of their architect, Mr. W. E. Trent, F.S.I., will provide seating for about 3,000 persons and will cost approximately £500,000.

### Aerodrome for Hull.

A proposal that a municipal aerodrome be established at Hull has been approved by a joint committee of the corporation, and instructions given for inquiries to be made for suitable sites. The Air Ministry suggested that the aerodrome should be not less than 800 yards square.

# THE SCOTTISH BUILDER

## NEW BUILDINGS

**Edinburgh.** — SCHOOLS. — The Edinburgh Education Authority have been granted warrant by the Dean of Guild Court to build two new schools at a combined estimated cost of about £47,000. The larger of these buildings, which is to serve as a preparatory and junior department for the Royal High School, is to be erected at Northfield Broadway, off Willowbrae-road, on a site adjoining the school playing field at Jock's Lodge. There will be twelve classrooms, with 480 places, facing south. The probable cost is £36,865. The architects are Messrs. Reid & Forbes. The other school, which is to be at Gorgie-road, is for the education of mentally deficient children. There will be five classrooms, with places for 100 pupils. The plans have been prepared by the Authority's Master of Works. The estimated cost is £10,000. Warrants have also been granted by the Court to the trustees of St. Anne's Parish Church, Corstorphine, to build a church hall. The hall, which is to harmonise with the church buildings, is to be of stone, and will have seatings for over 350 persons. The cost is approximately £2,600. Mr. T. Bowhill Gibson is architect. Other applications were: Hepburn Brothers—nine bungalows at Meadowhouse-road, Corstorphine; and Mrs. Marion M'Laren—eight villas at 14-28, Sydney-terrace.

**Glasgow.**—BUILDINGS.—At the Glasgow Dean of Guild Court plans have been submitted by the Corporation Housing Department and approved for the erection of 90 houses of three and four apartments at Allan-street and Woddrop-street, and a similar number at Braidfauld-street. Both schemes will cost about £26,000 each.

**Glasgow.**—BRIDGE.—The Glasgow Corporation's Statute Labour Committee have recommended approval of plans prepared by the Master of Works for a new bridge, 70 ft. in width, to be constructed across the River Clyde at Govan-street.

**Kirkcudbright.**—HOUSING.—The Kirkcudbright Town Council has intimated that the Scottish Board of Health has approved of the scheme in respect of the erection on Tongland-road of 50 houses, comprising 10 two-apartment single-story cottages, 10 three-apartment double-story cottages, and 10 four-apartment double-story cottages, at a total estimated cost of £11,737 15s. 11d.

## HOUSING PROGRESS

THE following figures show the progress that has been made in State-aided housing schemes in Scotland to January 31, 1929 :—

| | Completed. | Under Construction |
|---|---|---|
| 1919 Act ... ... ... | 25,129 | — |
| do. (by public utility societies) ... ... ... | 421 | — |
| Private subsidy schemes (1919 Additional Powers Act) ... ... ... | 2,324 | — |
| Slum clearance schemes ... | 8,970 | 2,521 |
| 1923 Act :— | | |
| By local authorities ... | 4,006 | — |
| By private enterprise ... | 14,659 | 2,370 |
| By public utility societies | 80 | — |
| 1924 Act :— | | |
| By local authorities ... | 30,422 | 9,649 |
| By private enterprise ... | 549 | 806 |
| By public utility societies | 87 | 40 |
| Demonstration houses ... | 17 | — |
| Steel houses erected on behalf of Government by Scottish National Housing Company ... ... ... | 2,552 | — |
| | 89,224 | 15,386 |

### Mr. A. Dreyfus.

We record with regret that Mr. Auguste Dreyfus passed away suddenly on February 17 from heart failure, at the age of 83. Mr. Dreyfus, who was the founder of Messrs. A. Dreyfus, Ltd., was well known to the architectural and building world in connection with the restoration of stonework in Tabard's patent metallic stone—which he had been carrying out since 1884. He died "in harness," having been at his office the day before his death.

## BUILDING TRADE WAGES IN SCOTLAND.*

**THE following are the present rate of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.**

| | Masons. | Bricklayers. | Carpenters, Joiners. | Plasterers. | Slaters. | Plumbers. | Painters. | Labourers—Masons'‡ Bricklayers'‡ Plasterers'† |
|---|---|---|---|---|---|---|---|---|
| Aberdeen | 1/7½ | 1/7½ | 1/7½ | 1/8½ | 1/7½ | 1/7½ | 1/8 | ‡1/2½ †1/2½ |
| Airdrie | 1/7½ | 1/7½ | 1/7½ | 1/8½ | 1/7½ | 1/7½ | 1/8 | ‡1/2½ †1/2½ |
| Alexandria | 1/7½ | 1/7½ | 1/7½ | 1/8½ | 1/7½ | 1/7½ | 1/8 | ‡1/2½ †1/2½ |
| Arbroath | 1/6½ | 1/6½ | 1/6½ | 1/7½ | 1/6½ | 1/6½ | 1/5½ | 1/1 |
| Ayr | 1/7½ | 1/7½ | 1/7½ | 1/8½ | 1/7½ | 1/7½ | 1/8 | 1/2½ |
| Bathgate | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/6½ | 1/2 to 1/3 |
| Blairgowrie | 1/7 | 1/7 | 1/7 | 1/7½ | 1/5 | 1/7 | 1/4 | 10d. to 1/- |
| Bo'ness | 1/7½ | 1/7½ | 1/7½ | 1/8½ | 1/7½ | 1/7½ | 1/8 | ‡1/2½ †1/2½ |
| Coatbridge | 1/7½ | 1/7½ | 1/7½ | 1/8½ | 1/7½ | 1/7½ | 1/8 | ‡1/2½ †1/2½ |
| Dumbarton | 1/7½ | 1/7½ | 1/7½ | 1/8½ | 1/7½ | 1/7½ | 1/8 | ‡1/2½ †1/2½ |
| Dumfries | 1/6½ | 1/6½ | 1/6½ | 1/7½ | 1/6½ | 1/6½ | 1/6½ | 1/2 |
| Dundee | 1/7½ | 1/7½ | 1/7½ | 1/8½ | 1/7½ | 1/7½ | 1/8 | ‡1/3 †1/2½ |
| Dunfermline | 1/7½ | 1/7½ | 1/7½ | 1/8½ | 1/7½ | 1/7½ | 1/7½ | ‡1/2½ †1/2½ |
| Edinburgh | 1/7½ | 1/7½ | 1/7½ | 1/8½ | 1/7½ | 1/7½ | 1/8 | ‡1/3½ †1/2½ |
| Falkirk | 1/7½ | 1/7½ | 1/7 | 1/8 | 1/7 | 1/7 | 1/6½ | 1/2½ |
| Fort William | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/2 |
| Galashiels | 1/6½ | 1/7 | 1/6½ | 1/7 | 1/6½ | 1/6½ | 1/7 | 1/2 |
| Glasgow | 1/7½ | 1/7½ | 1/7½ | 1/8½ | 1/7½ | 1/7½ | 1/8 | ‡1/2½ †1/2½ |
| Greenock | 1/7½ | 1/7½ | 1/7½ | 1/8½ | 1/7½ | 1/7½ | 1/7 | 1/2½ |
| Hamilton | 1/7½ | 1/7½ | 1/7½ | 1/8½ | 1/7½ | 1/7½ | 1/8 | ‡1/2½ †1/2 |
| Hawick | 1/7 | 1/7 | 1/7 | 1/7-1/7½ | 1/7 | 1/7 | 1/7 | 1/2½ |
| Helensburgh | 1/7½ | 1/7½ | 1/7½ | 1/8½ | 1/7½ | 1/7½ | 1/7 | 1/2½ |
| Inverness | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/6 | 1/- to 1/2 |
| Kilmarnock | 1/7½ | 1/7½ | 1/7½ | 1/8½ | 1/7½ | 1/7½ | 1/8 | 1/2½ |
| Kirkcaldy | 1/7½ | 1/7½ | 1/7½ | 1/8½ | 1/7½ | 1/7½ | 1/8 | ‡1/2½ †1/2½ |
| Kirkwall | 1/5 | 1/5 | 1/4 | 1/5 | 1/5 | 1/4 | 1/4 | 1/- |
| Lanark | 1/7½ | 1/7½ | 1/7½ | 1/8½ | 1/7½ | 1/7½ | 1/8 | ‡1/2½ †1/2½ |
| Leith | 1/7½ | 1/7½ | 1/7½ | 1/8½ | 1/7½ | 1/7½ | 1/8 | ‡1/3½ †1/2½ |
| Motherwell | 1/7½ | 1/7½ | 1/7½ | 1/8½ | 1/7½ | 1/7½ | 1/8 | ‡1/2½ †1/2½ |
| Perth | 1/7½ | 1/7½ | 1/7½ | 1/8½ | 1/7½ | 1/7½ | 1/8 | ‡1/2½ †1/2½ |
| Stirling | 1/7½ | 1/7½ | 1/7½ | 1/8½ | 1/7½ | 1/7½ | 1/7½ | 1/2½ |
| Stirlingshire (Eastern District) | 1/7½ | 1/9 | 1/7½ | 1/8½ | 1/7½ | 1/7½ | 1/8 | 1/2½ |
| Wishaw | 1/7½ | 1/7½ | 1/7½ | 1/8½ | 1/7½ | 1/7½ | 1/8 | ‡1/2½ †1/2½ |

* The information given in this table is copyright. The rates of wages in the various towns in England and Wales are given on page 441.

# CURRENT PRICES FOR BUILDING WORK IN LONDON*

## EXCAVATOR.

| | | s. | d. |
|---|---|---|---|
| Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep | per yard cube | 11 | 0 |
| Add if in clay | " " | 1 | 0 |
| Add for every additional depth of 6 ft. | " " | 0 | 6 |
| Planking and strutting to trenches | per foot super | 0 | 5 |
| Do. to sides of excavation, including shoring | " " | 1 | 0 |

## CONCRETOR.

| | | s. | d. |
|---|---|---|---|
| Portland cement concrete in foundation 1 to 6 | per yard cube | 38 | 0 |
| Add if in underpinning in short lengths | " " | 7 | 0 |
| Add if in floors 6 in. thick | " " | 3 | 3 |
| Add if in beams | " " | 3 | 9 |
| Add if aggregate 1 : 2 : 4 | " " | 10 | 0 |
| Add for hoisting not exceeding 10 ft. beyond the first 10 ft. | " " | 2 | 6 |

## BRICKLAYER.

| | | £ | s. | d. |
|---|---|---|---|---|
| Reduced brickwork in lime mortar and Fletton bricks | per rod | 32 | 0 | 0 |
| Add if in stocks | " | 7 | 10 | 0 |
| Add if in Staffordshire blues | " | 22 | 0 | 0 |
| Add if in Portland cement and sand | " | 1 | 10 | 0 |

### FACINGS.

| | | s. | d. |
|---|---|---|---|
| Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks | per ft. super | 0 | 0 | 1¼ |

### POINTING.

| | | s. | d. |
|---|---|---|---|
| Neat flat struck or weathered joint | " " | 0 | 0 | 3 |

### ARCHES.

| | | s. | d. |
|---|---|---|---|
| Extra only to the price of ordinary brickwork :— | | | |
| Fair external in half brick rings | " " | 0 | 0 | 10 |
| Axed in stocks | " " | 0 | 1 | 9 |
| Rubbed and gauged jointed in putty camber or segmental | " " | 0 | 6 | 0 |

### SUNDRIES.

| | | s. | d. |
|---|---|---|---|
| Damp course in double course of slates breaking joint and bedded in Portland cement | " " | 0 | 1 | 0 |
| Setting ordinary register grates and stoves | each | 1 | 0 | 0 |
| Setting kitchener, including forming flues, &c., with all necessary fire bricks | " | 4 | 15 | 0 |

## ASPHALTER.

| | | s. | d. |
|---|---|---|---|
| Half-inch horizontal damp course | per yard super | 4 | 6 |
| Three-quarter-inch vertical damp course | " " | 9 | 6 |
| Three-quarter-inch on flats in two thicknesses | " " | 6 | 3 |
| Angle fillet | per foot run | 0 | 3 |
| Skirting and fillet 6 in. high | " " | 1 | 2 |

## MASON.

| | | s. | d. |
|---|---|---|---|
| York stone templates fixed | per foot cube | 13 | 0 |
| York stone sills fixed | " " | 22 | 0 |
| Bath stone and all labour fixed | " " | 10 | 6 |
| Beer stone and all labour fixed | " " | 15 | 0 |
| Portland stone fixed | " " | 20 | 0 |

## SLATER.

| | | s. | d. |
|---|---|---|---|
| Welsh 16 in. × 8 in. 3 in. lap, including nails | per square | 72 | 9 |
| Do. 20 in. × 10 in. Do. Do. | " | 80 | 9 |
| Do. 24 in. × 12 in. Do. Do. | " | 90 | 0 |

## CARPENTER AND JOINER.

| | | s. | d. |
|---|---|---|---|
| Fir framed in plates | per foot cube | 5 | 0 |
| Do. joists | " " | 5 | 6 |
| Do. roofs, floors and partitions | " " | 6 | 0 |
| Do. trusses | " " | 8 | 6 |

| | | ¾" | 1" | 1¼" | 2" |
|---|---|---|---|---|---|
| Deal rough close boarding | per sq. | 35/6 | 40/- | 45/- | 72/- |

| | | s. | d. |
|---|---|---|---|
| Flat centering for concrete floor, including struts or hangers | " | 50 | 0 |
| Do. to beams | per ft. sup. | 0 | 11 |
| Centre for arches | " | 1 | 6 |
| Gutter boards and bearers | " | 1 | 0 |

### FLOORING.

| | | ¾" | 1" | 1¼" | 1½" |
|---|---|---|---|---|---|
| Deal edges shot | per sq. | — | 44/6 | 53/- | 60/6 |
| Do. tongued and grooved | " | — | 49/- | 57/6 | 65/- |
| Do. matchings | " | 45/- | 51/- | — | — |
| Moulded skirting, including backings and grounds | per ft. sup. | 1/6 | 1/9 | 2/- | 2/6 |

### SASHES AND FRAMES.

| | | s. | d. |
|---|---|---|---|
| One-and-a-half moulded sashes or casements | per foot super | 1 | 10 |
| Two Do. Do. Do. | " " | 2 | 1 |
| Add for fitting and fixing | " | 0 | 3 |
| Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights ; average size | " " | 3 | 9 |

### DOORS.

| | | 1½" | 1¾" | 2" |
|---|---|---|---|---|
| Two-panel square framed | per ft. sup. | 2/1 | 2/4 | 2/6 |
| Four-panel Do. | " | 2/5 | 2/8 | 2/11 |
| Two-panel moulded both sides | " | 2/8 | 2/11 | 3/2 |
| Four-panel Do. Do. | " | 2/11 | 3/2 | 3/5 |

## CARPENTER AND JOINER—continued.

### FRAMES.

| | | s. | d. |
|---|---|---|---|
| Deal wrot moulded and rebated | per foot cube | 14 | 0 |

| | | 1" | 1¼" | 1½" |
|---|---|---|---|---|
| Plain deal jamb linings framed | per ft. sup. | 1/7 | 1/8 | 1/11 |
| Deal shelves and bearers | " | 1/4 | 1/6 | 1/9 |
| Add if cross-tongued | " | 2d. | 2d. | 2d. |

### STAIRCASES.

| | 1" | 1¼" | 1½" | 2" | 2½" |
|---|---|---|---|---|---|
| Deal treads and risers in and including rough brackets | 2/1 | 2/4 | 2/9 | — | — |
| Deal strings wrot on both sides and framed | 1/8 | 2/- | 2/2 | 2/8 | — |

| | | s. | d. |
|---|---|---|---|
| Housings for steps and risers | each | 0 | 11 |
| Deal balusters, 1 in. × 1¼ in. | per ft. run | 0 | 9 |
| Mahogany handrail : average, 3 in. × 3 in. | " " | 6 | 0 |
| Add if ramped | " " | 12 | 0 |
| Add if wreathed | " " | 24 | 0 |

### FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

| | | | |
|---|---|---|---|
| 6 in. barrel bolts | 8½d. | Rim locks | 2/- |
| Sash fasteners | 1 1½d. | Mortice locks | 4/6 |
| Casement fasteners | 1/5 | Patent spring hinges and letting into floor and making good | 19/- |
| Casement stays | 1/2 | | |
| Cupboard locks | 1/5 | | |

## FOUNDER AND SMITH.

| | | s. | d. |
|---|---|---|---|
| Rolled steel joists | per cwt. | 16 | 3 |
| Plain compound girders | " | 19 | 0 |
| Do. stanchions | " | 21 | 9 |
| In roofwork | " | 27 | 6 |

## RAIN-WATER GOODS.

| | | 3" | 4" | 5" | 6" |
|---|---|---|---|---|---|
| Half-round plain rebated joints | ft. run | 1/6 | 1/9 | 2/- | 2/6 |
| Ogee Do. Do. | " | 1/9 | 2/- | 2/6 | 3/3 |
| Rain-water pipes with ears | " | 1/9 | 2/7 | — | — |
| Extra for shoes and bends | each | 4/4 | 5/11 | — | — |
| Do. stopped ends | " | 1/11 | 2/4½ | 3/7 | 4/- |
| Do. nozzles for inlets | " | 2/2 | 2/7 | 3/10 | 4/3 |

## PLUMBER.

| | | s. | d. |
|---|---|---|---|
| Milled lead and laying in flashings and gutters | per cwt. | 43 | 6 |
| Do. Do. in flats | " | 42 | 6 |
| Extra labour and solder in coated cesspools | each | 6 | 9 |
| Welf joint | per ft. run | 0 | 6 |
| Soldered seam | " " | 1 | 3 |
| Copper nailing | " " | 0 | 3 |

| | | ½" | ¾" | 1" | 1½" | 2" | 4" |
|---|---|---|---|---|---|---|---|
| Drawn lead waste | per ft. run | 1/2 | 1/9 | 2/- | 3/4 | 4/- | — |
| Do. service | " | 1/8 | 2/2 | 2/7 | 3/10 | — | — |
| Do. soil | " | — | — | — | — | — | 6/9 |
| Bends in lead pipe | each | — | — | — | — | 3/3 | 8/2 |
| Soldered stop ends | " | 1/2 | 1/8 | 2/1 | 2/10 | 3/6 | — |
| Read lead joints | " | 11d. | 1/- | 1/3 | 1/11 | 2/4 | 4/10 |
| Wiped soldered joints | " | 2/10 | 3/6 | 4/- | 4/11 | 6/6 | 9/9 |
| Lead traps and cleaning screws | " | — | — | — | 14/7 | 19/6 | — |
| Bib cocks and joints | " | 6/4 | 9/7 | 15/4 | 41/- | — | — |
| Stop cocks and joints | " | 15/4 | 17/2 | 25/8 | 64/- | — | — |

## PLASTERER.

| | | s. | d. |
|---|---|---|---|
| Render, float and set in lime and hair | per yard sup. | 2 | 6 |
| Do. Do. Sirapite | " " | 2 | 9 |
| Do. Do. Keen's | " " | 4 | 0 |
| Add saw lathing | " " | 1 | 7 |
| Add metal lathing | " " | 2 | 6 |
| (Not including hangers or runners, etc., for suspended ceilings.) | | | |
| Portland cement screed | " " | 2 | 2 |
| Do. plain face | " " | 3 | 3 |
| Mouldings in plaster | per 1 girth | 0 | 1½ |
| One-and-a-half granolithic paving | per yard sup. | 5 | 6 |

## GLAZIER.

| | | s. | d. |
|---|---|---|---|
| 21-oz. sheet plain | per foot sup. | 0 | 8½ |
| 26-oz. Do. | " " | 1 | 0 |
| Obscured sheet | " | 1 | 1 |
| ⅛-in. rolled plate | " " | 0 | 9 |
| ¼ in. rough rolled or cast plate | " " | 0 | 10½ |
| ¼-in. wired cast plate | " " | 1 | 4 |

## PAINTER.

| | | s. | d. |
|---|---|---|---|
| Preparing and distempering, 2 coats | per yard sup. | 0 | 9 |
| Knotting and priming | " " | 0 | 7 |
| Plain painting, 1 coat | " " | 0 | 9 |
| Do. 2 coats | " " | 1 | 2 |
| Do. 3 coats | " " | 1 | 9 |
| Do. 4 coats | " " | 2 | 4 |
| Graining | " " | 2 | 3 |
| Varnishing twice | " " | 1 | 9 |
| Sizing | " " | 0 | 3 |
| Flatting | " " | 0 | 7 |
| Enamel | " " | 1 | 1 |
| Wax polishing | per foot sup. | 0 | 6 |
| French polishing | " " | 1 | 2 |
| Preparing for and hanging paper | per piece, 2/- to 4/- | | |

* These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

# TENDERS

* Denotes *accepted.*
† Denotes *provisionally accepted.*
‡ Denotes *recommended for acceptance.*
§ Denotes *accepted subject to modifications.*
¶ Denotes *accepted by H.M. Office of Works, and H.M. War Office.*

**Aberdeen.**—Public convenience at Balnagask, for the T.C. Mr. Thos. F. Henderson, Burgh Surveyor:—
*S. B. Russell, Affleck-street, Aberdeen ..... £399 7 10

**Abertillery.**—Electrical central sub-station at Carlyle-street, for the U.D.C. Mr. Dawson Thomas, Electrical Engineer and Manager:—
David Richards, Crumlin.
Alfred Adams, Crosskeys.
Gay & Head, Abertillery.
John J. Partridge, Newport.
*John Snell, Abertillery.
William Arthur, Abersychan.

**Amesbury.**—2 pairs non-parlour type houses at Allington; 2 pairs non-parlour type at Boscombe: and 2 pairs non-parlour type at Newton Tony, for the R.D.C. Mr. G. Vincent, surveyor:—
*J. Williams, Porth, Rhondda ..... £4,839

**Ashburton.**—Alterations at the Town Hall, for the U.D.C.:—
*F. Langler ..... £107 9 6

**Belfast.**—Improvements to the Central Public Library in Royal-avenue, for the Libraries Committee. Mr. R. B. Donald, City Surveyor:—
*Thos. Lindsay, 2a, Richview-street, Belfast.

**Belfast.**—Painting at the infectious diseases hospital, Purdysburn, for the Public Health Committee. City Surveyor:—
*G. S. Meldrum, 39/41, Belmont-road, Belfast.

**Belfast.**—Church. Messrs. Blackwood & Jury, architects, Donegall-place:—
*Courtney & Co., Belfast.

**Bognor.**—New school room, class rooms, etc., adjoining Bognor Baptist Church, Canada-grove. Messrs. Gordon Griffiths & E. Brian Tyler, A.R.I.B.A., architects, Midland Bank-chambers, The Cross, Chichester. Specification by Mr. E. Brian Tyler, A.R.I.B.A.:—

| | |
|---|---|
| E. J. Peters, Bognor | £2,475 0 0 |
| E. S. Webberley, Bognor | 2,043 0 0 |
| F. Wood, West Bognor | 1,978 0 0 |
| A. A. W. Tribe, Bognor | 1,888 0 0 |
| Percival Cooper, Littlehampton | 1,846 0 0 |
| A. E. Cheney, Ltd., Bognor | 1,785 0 0 |
| F. W. Hill, Bognor | 1,780 0 0 |
| A. R. Dairy, Ltd., Middleton | 1,765 0 0 |
| H. W. Seymour, Bognor | 1,702 3 7 |
| Thorn, Son & Vick, Chichester | 1,677 0 0 |
| C. D. & E. Chuter, Bognor | 1,568 0 0 |
| *A. M. Urquhart (West Sussex General Builders), The Hornet, Chichester | 1,525 0 0 |

**Boston.**—Reconstruction of the nave roof of Boston "Stump," for the Restoration Committee:—
*Cornish & Gaymer, North Willesden £7,451

**Bradford.**—Building at Birkshall Works, for the Corporation. Mr. Ernest J. Sutcliffe, engineer:—
*Goodall, Clayton and Co., Ltd., Hunslet, Leeds ..... £3,780

**Bradford.**—Recreation room for women at Grassington Sanatorium, for the Health Committee. City Architect:—
*A. Maxfield & Son, Grassington.

**Brighton.**—Heating arrangements to Ward IV in the Borough Sanatorium, for the C.B.:—
*Adams Bros. ..... £242 11

**Brighton.**—208 houses on the Whitehawk Valley housing estate, for the C.B.:—
*Eadie Towers & Co., Wolverhampton £76,722
(Subject to M.H. approval.)
(In view of tender withdrawn.)

**Brighton.**—Six additional houses on the North Moulsecoomb housing estate, for the C.B.:—
*Griffiths, Sons & Cromwell ..... £3,430

**Brighton.**—Extensions to circulating water system, at the Southwick Power Station, for the C.B.:—

| | |
|---|---|
| C. Brand & Son | £28,078 14 9 |
| John Mowlem & Co., Ltd. | 25,655 19 8 |
| ‡Cochrane & Sons | 16,445 1 4 |
| Foundation Co., Ltd. | 15,858 17 8 |

**Bucklow.**—Public convenience in Mill-lane, Northenden, for the R.D.C. Mr. R. Curtis Gorden, engineer and surveyor, 24-26, Station-buildings, Altrincham:—
*Moston Brick and Building Co., Ltd., Manchester.

**Budleigh Salterton.**—New Council yard and fire brigade station, for the Council:—
*J. W. Palmer, Budleigh Salterton £2,283 15 8

**Burnley.**—Bandstand in Townley Park, for the T.C.:—
*Clegg Bros., Ltd., Cooper-street, Burnley.

**Byfleet.**—16 cottages, for the U.D.C.:—

| | |
|---|---|
| Crossley & Sons, Byfleet | £6,968 |
| W. H. Gaze & Sons, Ltd., Kingston-on-Thames | 6,138 |
| Higlett & Hammond, Byfleet | 6,134 |
| Childs & Shee, Woking | 5,782 |
| Guilford & District Guild of Builders, Guildford | 5,696 |
| W. G. Tarrant, Ltd., Byfleet | 5,676 |
| A. E. Jones, Woking | 5,544 |
| Blackwell & Myers, Bexley Heath | 5,495 |
| *W. J. Drawley, Woking | 5,360 |

**Castleford (Yorks).**—Additions to Ashton-road School, Glass Houghton, for the West Riding E.C. Mr. H. Wormald, A.R.I.B.A., County Architect, County Hall, Wakefield:—
*A Gregory, Ltd., Leeds-road, Glass Houghton, near Castleford.
*Slaters*—
*H. & W. Parker, Leeds.
*Asphalters*—
*W. Hobson & Son, Sheffield.

**Cheltenham.**—Painting and repairs at the Poor Law Institution, Swindon-road, for the B.G. Mr. T. Malvern, L.R.I.B.A., architect, 21, Winchcombe-street:—
*E. Eager & Son, Cheltenham.

**Chenies.**—Construction of roads and sewers on the Beechwood estate. Mr. Brian L. Sutcliffe, A.R.I.B.A., architect, 7, Duke-street, Wigmore-street, London, W.1:—

| | |
|---|---|
| Charles Carter | £12,820 3 1 |
| Newitts | 12,262 7 6 |

**Chester.**—56 non-parlour type houses on the western portion of Eaton-road estate, for the City Council:—
*Harry Pugh, Caergwrle, near Wrexham ..... £22,596

**Chester.**—Alterations at the Hop Pole Paddock Lodge, including increased lavatory and cloak room accommodation, for the City Council:—
*T. Boddy, Broughton ..... £1,461 14

**Clayton-Le-Moors.**—Works in connection with the reconstruction of Hyndburn bridge on the Clayton-le-Moors-Whalley main road, for the Lancashire C.C. Mr. W. H. Schofield, Bridge Master and Surveyor, Fishergate Hill, Preston:—
*T. Varley & Son, Ltd., Whalley, near Blackburn ..... £7,489

**Colchester.**—New Council school at Lexden, for the E.C.:—

| | |
|---|---|
| A. E. Flory & Co. | £17,198 0 0 |
| W. Chambers & Son | 14,073 11 6 |
| J. W. Trudgett | 13,450 0 0 |
| H. Everett & Son | 13,440 0 0 |
| Borough Surveyor | 13,197 0 0 |
| W. A. Hills & Son | 13,165 0 0 |
| ‡F. Hutton & Son | 12,327 0 0 |

**Colwyn Bay.**—17 non-parlour type and 6 parlour type houses on the housing site, for the U.D.C. Mr. W. J. Dunning, engineer and surveyor:—

| | |
|---|---|
| Wooller & Sons, Colwyn Bay | £13,198 |
| Ashworth Bros., Colwyn Bay | 11,373 |
| G. & H. Jones, Gwaeysgor | 11,238 |
| J. R. Bithell, Llandudno Junction | 10,952 |
| David Ed. Evans, Old Colwyn | 10,807 |
| Joseph Davies, Birkenhead | 10,084 |
| R. Costain & Son, Ltd., Fazakerley, Liverpool | 10,047 |
| Edward Williams & Sons, Dyserth | 9,569 |
| *Robert Evans, Old Colwyn | 9,419 |


"HENDERSON"
SLIDING DOOR GEAR
FOR FACTORIES, GARAGES, SCHOOLS, ETC.,

"TANGENT JUNIOR" FOR LIGHT DOORS
"TANGENT SENIOR" FOR HEAVY DOORS.
WRITE FOR BOUND CATALOGUE B.26 TO
P.C. HENDERSON, LIMITED.
TANGENT WORKS, BARKING, ESSEX.


**Coventry.**—Extensions to the "Alma Inn." Messrs. F. P. Trepess & Son, architects, Church-street, Warwick:—
*Cross & Co., Coventry.

**Coventry.**—Alterations at the Alexandra Cinema. Mr. H. G. Bradley, architect, Temple-row, Birmingham:—
*Harris, Stratford-on-Avon.

**Crossmaglen.**—Technical school in Crossmaglen, for the Armagh County E.C. Capt. G. D. Taylor, architect, English-street, Armagh:—
*McDowell Bros., Bleary, Portadown, County Armagh ..... £1,500

**Croydon.**—Extension of the Croydon Baths, for C.B.:—
*E. H. Smith, Wellesley-road, Croydon ..... £15,250

**Darlington.**—Senior girls' school at North-road Municipal School, for the E.C. Mr. E. Minors, Borough Surveyor:—
*G. W. Lazenby, Ferry Hill.

**Darwen.**—Council School at Avondale-road, for the E.C. Mr. E. Marsden, Borough Surveyor:—
*Robert Shorrock & Son, Darwen.

**Derby.**—Improvements and extensions to St. Joseph's School, to bring them into up-to-date lines. Mr. Charles A. Edeson, A.R.I.B.A., architect, "Killinagh," Berry Hill-lane, Nottingham-road, Mansfield:—
*Carney & Son, Derby.

**Derby.**—402 houses at Alvaston, for the Corporation. Mr. C. A. Clews, Borough Surveyor:—
‡R. Clayborn, Derby.
‡F. Clough, West Ardsley.
‡Eadie Towers & Co., Ltd., Wolverhampton.

**Dorchester.**—4 houses at Stratton, for the R.D.C.:—
*W. J. Cooper & Son, Bridport.
(Subject to approval of M.H.)

**Eton.**—Additions and alterations to the sanitary accommodation at the Workhouse, at Slough, for the B.G. Mr. H. J. Stribling, A.R.I.B.A., architect, 65 and 67, High-street, Slough:—

| | |
|---|---|
| E. A. Collins, Slough | £1,142 0 |
| Norris & Co. (Builders), Sunningdale | 1,056 0 |
| W. Goddard & Son, Eton | 1,029 0 |
| H. D. Bowyer, Slough | 999 0 |
| E. J. Bailey, Gerrards Cross | 982 0 |
| H. W. Yates, Sunningdale | 939 0 |
| H. Street, Slough | 891 8 |
| J. Devenie, Ltd., Slough | 860 0 |

**Glasgow.**—New premises in Sauchiehall-street and Cambridge-street, for Messrs. C. & A. Modes, Ltd., Oxford-street, W.1. Messrs. North, Robin & Wilsdon, FF.R.I.B.A., architects, Townsend House, Greycoat-place, S.W.1. Mr. Louis C. Veale, F.S.I., 10, Vigo-street, Regent-street, W.1, quantity surveyor:—

| | |
|---|---|
| John Emery & Son, Glasgow | £52,593 |
| P. & W. Anderson, Ltd., Glasgow | 52,132 |
| Russell Building Co., Manchester | 51,081 |
| Thaw & Campbell, Glasgow | 50,776 |
| *Melville, Dundas & Whitson, Glasgow | 49,268 |

*Demolition*—
*Shaw & Campbell, Glasgow.
*Reinforced Concrete Work*—
*Melville, Dundas & Whitson, Glasgow.
*Heating*—
*Saunders & Taylors, Ltd., Manchester.
*Lifts*—
*Waygood-Otis, Ltd., London.
*Electric Lighting*—
*Charters, Glasgow.

**Halifax.**—Completion of the Arcade scheme at the Central Stores, Northgate, for the Industrial Society, Ltd. Messrs. Clement Williams & Sons, L.R.I.B.A., architects, Permanent-chambers, Commercial-street:—
*Crossley & Radcliffe.
*Carpenters and Joiners*—
*H. Gough & Sons.
*Plumbers*—
*J. Holdsworth.
*Plasterers*—
*J. Bancroft & Sons.
*Steelwork*—
*J. Berry & Sons.
*Shop Front*—
*Fielding & Bottomley.
(All of Halifax.)

**Haslingden.**—34 non-parlour type houses on the Longshoot site, for the T.C. Mr. R. Taylor, Borough Surveyor:—
*Exors. of Thos. Collinge, Victoria-street, Haslingden.

**Hemel Hempsted.**—48 houses in blocks of four on the Elephant Farm estate, for the Corporation. Mr. A. Murray-Smith, Borough Engineer, Market-square:—
*Corolite Construction, Ltd., 12/13, Henrietta-street, London, W.C.2 ... £19,700

**Hyde.**—New school for the E.C. Messrs. North Robin & Wilsdon, FF.R.I.B.A., architects, Townsend House, Greycoat-place, S.W.1:—
*Building Works—*
*W. Norgrove & Sons, Ltd., Hyde ... £19,100
*Steelworks—*
*E. Wood & Co., Ltd., Trafford Park, Manchester.
*Patent Flooring—*
*J. Gerrard & Sons, Ltd., Swinton, Manchester.

**High Wycombe.**—For erection of houses as follows, for the T.C.:—Section 1: 36 parlour type, 60 non-parlour; Section 2: 74 non-parlour; and Section 3: 12 parlour type, 54 non-parlour. Mr. T. J. Rushbrooke, Borough Surveyor.

| | Whole scheme. | Sec. 1. | Sec. 2. | Sec. 3. |
|---|---|---|---|---|
| | £ | £ | £ | £ |
| G. Biggs & Sons | 116,084 | 47,394 | 36,407 | 32,793 |
| W. Jones & Sons, Ltd. | 105,630 | — | — | — |
| Lawes, Cherry & Co. | 101,896 | 41,983 | 31,493 | 28,408 |
| Unit Construction | 110,750 | — | — | — |
| G. Stubbings | 99,575 | — | — | — |
| Grosvenor Const. Co. | 99,420 | — | — | — |
| Marshall Hamer, Ltd. | 98,418 | — | — | — |
| H. Boot & Sons, Ltd. | 98,189 | — | — | — |
| Blackwell & Meyer | 98,059 | 40,273 | 30,388 | 27,398 |
| Structural Contractors | 97,935 | — | — | — |
| Corolite Constrn. Co. | 97,911 | — | — | — |
| Gibson & Sons | 95,835 | ‡38,150 | 30,603 | 27,082 |
| Simms, Sons & Cooke | 91,840 | — | — | — |
| Sherren, Ltd. | 91,814 | — | — | — |
| A. C. Dean | — | 39,804 | ‡29,684 | 26,902 |
| C. Jefferson | — | 38,800 | 30,000 | ‡27,500 |

**Hindley.**—Reconstruction of the general offices, for the Industrial Co-operative Society, Ltd. Mr. Arthur Platt, architect:—
*H. Fairhurst, Wigan.

**Hunsworth.**—Mortuary, for the U.D.C.:—
*Brickwork—*
*H. Hirst.
*Plumber—*
*A Robertshaw.

**Islington.**—Additions to the Female Receiving Ward at the Infirmary, Highgate-hill, N.19, for the St. Mary, Islington, B.G. Messrs. Vine & Vine, A.R.I.B.A., architects, Tudor Chambers, Station-road, Wood Green, N.22:—

| | |
|---|---|
| A. C. MacKinlay | £1,453 0 0 |
| Clark Bros. | 1,190 0 0 |
| G. H. Denne & Son | 1,189 0 0 |
| Mattock Bros. | 1,157 0 0 |
| H. E. Winskell | 1,111 6 0 |
| R. Mansell | 1,097 0 0 |
| Stevens & Sons | 1,094 0 0 |
| T. & R. Muirhead | 1,089 0 0 |
| W. H. Wagstaff & Sons | 1,089 0 0 |
| Canonbury Construction Co., Ltd. | 1,085 0 0 |
| Bridge & Co. | 1,084 0 0 |
| R. J. Rowley, Ltd. | 1,077 0 0 |
| West Woodworkers, Ltd. | 1,070 0 0 |
| Hammond & Barr, Ltd. | 1,067 0 0 |
| Leonard Lown & Co. | 1,065 10 0 |
| *A. Logan | 1,033 0 0 |

(All of London.)

**Killarney.**—Introduction of hot and cold water into 34 bedrooms of the International Hotel, and for the erection of two additional bathrooms and two w.c.'s; for the central heating of the lounge, and for such other miscellaneous alterations and works. Mr. G. Deane Roe, architect, engineer and surveyor, 3, Denny-street, Tralee:—

| | |
|---|---|
| McManus, Hallett & Best, South City Plumbing Works, Dublin | £1,384 |
| S. Nesbitt, Tralee | 1,232 |
| Macguire & Gatchell, Ltd., Dublin | 1,158 |
| *C. McCarthy & Sons, Emmet-place, Cork | 898 |

**Kirkconnel.**—Police station, for the Dumfriesshire C.C.:—
*Mason and Brick—*
*Alex. Aitkenhead, 334, Glasgow-road, Blantyre.
*Carpenters, Joiners, etc.—*
*Jas. Hannan & Sons, 43, Lady-street, Annan.
*Slater and Rough Cast, and Plumber and Gas Fitter—*
*A. Ruthven, 90, Main-street, Prestwick.
*Plaster and Concrete—*
*Jas. Laidlaw, Ecclefechan.

**Kirkham.**—Electrical installation at the Institution and Offices, for the Fylde B.G. Mr. F. Harrison, F.R.I.B.A., architect, 30, Willow-street, Accrington:—
*P. J. Frampton, Blackpool.

**Leeds.**—Alterations to the shelters at Central Home, Street-lane, Roundhay, for the B.G. Mr. J. H. Ford, clerk, 11, South-parade:—
*W. Spencer & Sons, 34, Cedar-road, Armley £121 19 6

**Leeds.**—New premises in Bear-lane, for Messrs. C. & A. Modes, Ltd., London. Messrs. North, Robin & Wilsdon, FF.R.I.B.A., architects, Townsend House, Greycoat-place, S.W.1. Mr. Louis C. Veale, 257, Oxford-street, W.1, quantity surveyor:—

| | |
|---|---|
| A. Waterman | £14,129 |
| Paul Rhodes, Ltd. | 13,747 |
| William Airey & Sons, Ltd. | 13,110 |
| C. Higgins | 12,400 |
| *W. J. & R. Turnbull, Dewsbury-road, Leeds | 11,892 |

*Steelwork—*
*London & Wales Steel Construction Co., Ltd., London.
*Shop Fronts—*
*Frederick Sage & Co., Ltd., London.
*Heating—*
*Saunders & Taylors, Ltd., Manchester.
*Lifts—*
*Waygood-Otis, Ltd., London.

**Leigh.**—132 non-parlour type houses on the Cowlane housing estate, for the Corporation. Mr. J. H. Clare, Borough Surveyor:—
*J. H. Brearley, Bacup.

**London.**—Alterations, etc., at the Lambeth Hospital, for the B.G. Messrs. Woodward & Brooks, architects and surveyors, 17, Old Queen-street, S.W.1:—
*Steelwork—*
*T. C. Jones & Co., Ltd.
*York stone—*
*W. Benfield & Sons.
*Maple flooring—*
*Hollis Bros. & Co., Ltd., Hull.
*Asphalt—*
*Ragusa Asphalt Co., Ltd.
(All of London.)

**London.**—Reinforced concrete raft, retaining wall, drainage and excavation, in connection with proposed new wing at the St. Joseph College, Mill Hill, N.W., for the Society of St. Joseph. Messrs. North, Robin & Wilsdon, FF.R.I.B.A., architects, Townsend House, Greycoat-place, S.W.1. Mr. Henry A. Mackmin, F.S.I., quantity surveyor, 10, Vigo-street, Regent-street, W.1:—

| | A | B |
|---|---|---|
| Edwards Construction Co., Ltd. | £4,143 | £3,916 |
| Allen Fairhead & Sons, Ltd. | 3,726 | 3,526 |
| Bovis (1928), Ltd. | 3,447 | 3,202 |
| J. F. Blair & Co., Ltd. | 3,399 | 3,049 |
| Walter Jones & Sons, Ltd. | 3,287 | — |
| F. Parvin, Ltd. | 3,075 | 3,025 |
| Frank Bevis, Ltd. | 3,188 | 2,740 |
| Marshall Hamer, Ltd. | *2,884 | 2,612 |

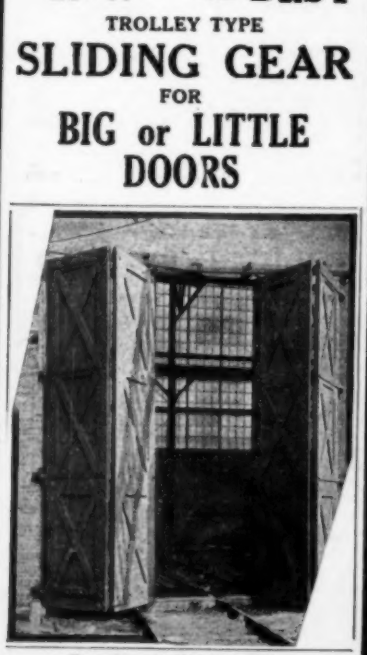
A. Includes for carting away excavated materials.
B. Includes for spreading and levelling excavated material within 100 yards from site of new building.

**London.**—Alterations, etc., at 27, Ladbroke-grove, W.11. Mr. Harry W. Ford, architect, 11, Old Queen-street, S.W.1:—

| | |
|---|---|
| C. P. Roberts & Co., Ltd. | £530 |
| Colley & Son | 620 |
| Bovis (1928), Ltd. | 687 |

(All of London.)


"R-W" THE BEST
TROLLEY TYPE
SLIDING GEAR
FOR
BIG or LITTLE
DOORS



Four Door "SLIDETITE."
(all other systems made)
GARAGES FACTORIES
AEROPLANE HANGARS
PASSENGER LIFTS
E. HILL ALDAM & Co., Ltd.
THE SLIDING DOOR PEOPLE
93, STAMFORD STREET, LONDON, S.E.1.


**London.**—Building works at 15, Grove End-road, St. John's Wood, N.W. Messrs. W. E. Riley & Glanfield, FF.R.I.B.A., architects, 6, Raymond-buildings, Grays Inn, W.C.1:—

| | |
|---|---|
| Bovis (1928), Ltd. | £765 |
| William Willett, Ltd. | 718 |
| Whitby's, Ltd. | 636 |
| J. Marsland & Son, Ltd. | 577 |

**London.**—Shops and showrooms, billiard hall, etc., at 177-187, Whitecross-street, E.C.1, for the Central Commercial Properties, Ltd. Messrs. North, Robin & Wilsdon, FF.R.I.B.A., architects, Townsend House, Greycoat-place, S.W.1:—

| | |
|---|---|
| Edwards Construction Co., Ltd. | £7 858 |
| All-In Building Company | 7,433 |
| Hammond & Barr, Ltd. | 7,340 |
| Bridges & Co. | 7,300 |
| J. Marsland & Sons, Ltd. | 7,180 |
| *Bovis (1928), Ltd., 43, Upper Berkeley-street, W. | 7,168 |

*Steelwork—*
*Powers & Deane Ransomes, Ltd., London, E.
*Stonework—*
*Plasm Company, East Molesey.

**London.**—Installation of electricity for lighting, cooking and heating in the tenements of the central (No. 1) block of dwellings which is now in course of erection on Ossulston estate, St. Pancras, for the L.C.C.:—

| | |
|---|---|
| General Electrical Maintenance Co., Pinner | £4,219 0 |
| J. Nicoll | 3,684 10 |
| Fred Hodgson & Co., Ltd. | 2,879 0 |
| E. Wight & Co. | 2,857 17 |
| H. H. Bucklar, Hitchin | 2,701 0 |
| Aldwych Electrical, Ltd. | 2,592 10 |
| A. Higginbotham & Sons, Bradford | 2,530 0 |
| Joseph Vigor | 2,492 11 |
| Engineering Works (Electrical and General), Ltd. | 2,367 0 |
| W. Davey | 2,362 0 |
| Harland & Wolff, Ltd. | 2,357 13 |
| Tredegars (1923), Ltd. | 2,354 6 |
| Eons Electrical Co. | 2,347 19 |
| E. Dyne | 2,246 10 |
| Alpha Manufacturing and Electrical Co., Ltd. | 2,150 0 |
| A. V. Gifkins & Co., Ltd. | 1,999 0 |
| Electricity Services, Ltd. | 1,960 0 |
| Hall's Longitudinal Lighting Co., Ltd. | 1,834 — |
| G. V. Francis | 1,794 3 |
| *Alexander Hawkins & Sons | 1,739 0 |
| C. Luidop & Son, Liverpool | 1,393 3 |
| Chief Engineer's estimate | 1,790 0 |

(Remainder of London.)

**London.**—Proposed showrooms, etc., in Stanley Park-road, Wallington, for the Croydon Gas Co. Mr. A. Douglas Robinson, architect, 66, Cannon street, E.C.4:—

| | |
|---|---|
| A. B. Symes, Ltd. | £16,897 |
| A. H. Roper | 16,831 |
| Negus, Ltd. | 16,761 |
| Higgs & Hill | 16,720 |
| E. J. Saunders | 16,700 |
| C. H. Gibson | 16,550 |
| Chas. R. Price | 16,467 |
| Truett & Steel | 16,174 |
| Grace & Marsh | 16,150 |
| W. H. Gaze & Sons, Ltd. | 15,873 |
| *E. H. Smith, Croydon | 15,680 |

**London.**—Garages at Palmers Green, N.13, for Messrs. Lowe & Green:—
*S. G. Goulding, Hornsey.

**London.**—For electric light installation at South Hallsville school, for the West Ham E.C. Mr. John H. Jacques, F.R.I.B.A., architect, 61, West Ham-lane, Stratford, E.15:—

| | |
|---|---|
| Shrosbery Bakewell & Co., Ltd. | £935 0 |
| Harden & Chinery | 900 0 |
| J. Nicoll & Sons | 856 11 |
| West Ham Electricity Dept. | 770 0 |
| Warren Smith & Co. | 760 0 |
| Telephone & Electrical Maintenance Co. | 735 0 |
| Malcolm & Allan (London), Ltd. | 679 0 |
| Ellis & Ward, Ltd. | 634 0 |
| Alpha Manufacturing and Electrical Co., Ltd. | 549 0 |
| ‡Harland & Wolff | 545 0 |

**London.**—Provision of a mess-room for the non-resident hall-keepers and cleaning staff at Buckingham Palace-road Library, for the Westminster City Council. City Engineer:—

| | |
|---|---|
| Burton Bros. | £130 0 |
| Army & Navy Co-operative Society Ltd. | 128 10 |
| Walter Lilly & Co. | 117 0 |
| Sims & Russell | 108 5 |
| *F. C. Hoskins & Co., Ltd. | 105 0 |

¶**London.**—Tenders accepted for January by H.M. War Office:—Building Works and Services: Aldershot, married officers' quarters, W. Downson & Sons, Ltd., Bolton; Aldershot, R.E. office and married quarters, W. Tanner & Sons, Aldershot; Deepcut, additions to reception station, Crosby & Co., Ltd., Farnham; Edinburgh, Piershill Barracks, dining hall and cookhouse, Scottish General Haulage Co., Edinburgh; Plymouth, Royal Citadel, erection of iron building and crane, John Lysaght, Bristol; Bovington Camp, R.A.O.D. workshops, heating installation, Comyn, Ching & Co., Ltd., London; Colchester cavalry barracks, re-appropriation of stable block to provide garage accommodation, A. E. Flory & Co., Colchester.

**London.**—Re-wiring and supplying gearing lanterns in the second-class swimming bath at the Buckingham Palace-road, for the Westminster City Council:—

| | |
|---|---|
| H. E. Keen & Co., Ltd. | £159 10 |
| Speedy & Eynon | 145 0 |
| W. J. Furse & Co., Ltd. | 144 10 |
| Gaillard, Robinson & Co. | 122 10 |
| Buchanan & Curwen | 119 0 |
| *Coleby & Co., Tudor House, Princeton-street, W.C.1 | 105 0 |

**London.**—Tenders accepted by **H.M. Office of Works** for January:—Acton, W., training centre, erection, Allnatt, Ltd., London; Arnold, Nottingham, telephone exchange, erection, J. F. Bush, Nottingham; Bexhill-on-Sea P.O., tiler, J. Williams & Co., London; Bexley, Kent, P.O., alterations, Vegus, Ltd., London; steelwork, Banister, Walton & Co., Ltd., London; Bilston employment exchange, erection, E. Crowder, Birmingham; Birmingham Head P.O., steelwork, E. Wood & Co., Ltd., Manchester; Boscombe, Bournemouth, telephone exchange, erection, R. J. Bishop, Upper Parkstone; Carlton, Nottingham, telephone exchange, asphalter, Val de Travers Asphalte Paving Co., Ltd., London; concretor, F. J. Treacher & Co., Nottingham; joiner, Wm. Appleby & Son, Nottingham; steelwork, Bolckow Vaughan & Co., Middlesbrough; Ealing, W., sorting office, steelwork, T. C. Jones & Co., Ltd., London; East Malling, Maidstone, fruit storage testing station, fencing posts, Girlings Ferro Concrete Co., Ltd., Northfleet; Failsworth, Manchester, employment exchange, asphalter, La Brea Asphalte Co., Ltd., London; Farnborough, Hants, telephone exchange, plasterer, A. J. R. Aubry, Woking; G.P.O. (West), E.C., glazier, W. H. Heywood & Co., Ltd., London; Great Bookham, Leatherhead, telephone exchange, erection, Bunning & Fitton Adams, Ltd., Godalming; Hackney, E., P.O., painter, etc., J. W. Buckingham & Sons, Hendon; Harmondsworth, Yiewsley, Middlesex, Colnbrook Research Station, erection, F. D. Hidden & Co., Ltd., Brentford; Hazel Grove, Stockport, telephone exchange, asphalter, Limmer and Trinidad Lake Asphalt Co., Ltd., London; painter, Ashton & Townsend, Stockport; plumber, Hough & Higham, Stockport; steelwork, H. Parkes & Nephew, Ltd., Stockport; Kew Gardens, Surrey, refreshment pavilion, extension, H. D. Ebbutt & Son, Croydon; King's Langley, Herts, telephone exchange, concretor, Malcolm Macleod & Co., Ltd., London; steelwork, E. Wood & Co., Ltd., Manchester; Mansfield, employment exchange, erection, H. James, Jr., Mansfield; steelwork, G. Sands & Son, Ltd., Colwick; Morecambe, Lancs, P.O., joiner, Edmondson Bros., Ltd., Morecambe; Mumbles, Glam., Coastguard Station, alterations, T. Richards, Swansea; National Gallery, W.C., glazier, W. H. Heywood & Co., Ltd., London; Oldham, Temporary Sorting Office, alterations, S. Ashton (Oldham), Ltd., Oldham; Perth Head, P.O., alterations, T. J. Paxton, Perth; Pontypool, employment exchange, erection, Richard Jones, Caerphilly; Presteign, Radnor, Training Centre, painter, etc., E. Deacon, Kington; Preston, Inland Revenue Office, alterations, W. Eaves & Co., Ltd., Blackpool; Redcar, Yorks, P.O., erection, W. Pearson & Son, West Hartlepool; Rochdale, Old P.O., alterations, R. T. Howarth, Rochdale; Romford, telephone exchange, erection, W. Bundey, Westcliff-on-Sea; steelwork, C. J. Cooke & Co., Ltd., Manchester; Shobdon, Kingsland, Herefordshire, training centre, painter, etc., E. Deacon, Kington; Southend-on-Sea, Head P.O., steelwork, Measures Bros. (1911), Ltd., London, S.E.; Stanley, Co. Durham, telephone exchange, slater, Digby Nelson & Son, Sunderland; steelwork, Redpath, Brown & Co., Ltd., Edinburgh; Sunderland, telephone exchange, asphalter, Limmer and Trinidad Lake Asphalt Co., Ltd., London; Teddington, chemical laboratory, joiners, Central Joinery Co. (1927), Ltd., London; Rippers, Ltd., Castle Hedingham; steelwork, T. C. Jones & Co., Ltd., London; Teddington, physics building, steelwork, Banister, Walton & Co., Ltd., London; Theydon Bois, Epping, telephone exchange, asphalter, Ragusa Asphalte Paving Co., Ltd., London; Walham Green, S.W., employment exchange, asphalter, Standard Flat Roofing Co., London; pavior, etc., Granite Paving Co., London; Woodley, Stockport, telephone exchange, asphalter, Limmer and Trinidad Lake Asphalt Co., Ltd., London; steelwork, E. Wood & Co., Ltd., Manchester; stonework, Concrete Unit Co., Ltd., Manchester; National Gallery, W.C., heating, R. Crittall & Co., Ltd., London.

**London.**—Interior and exterior decorations and repair work at the Buckingham Palace-road establishment, for the Westminster City Council:—

| | |
|---|---|
| Burton Bros. | £1,152 10 |
| F. C. Hoskins & Co. | 908 0 |
| Army & Navy Co-operative Society, Ltd. | 810 0 |
| Walter Lilly & Co. | 675 0 |
| *Sims & Russell, Bloomburgh Street, S.W.1 | 616 0 |

**Lowestoft.**—New branch premises for Messrs. Marks & Spensers, Ltd., Chiswell-street, E.C.1. Mr. William A. Lewis, A.R.I.B.A. architect, 11, Finsbury-square, E.C.2. Messrs. Gleed, Sons & Co., 8, Martin-lane, E.C.4, quantity surveyors:—

*Building—*
*Bovis (1928), Ltd., 43, Upper Berkeley-street, London, W.1.
*Steelwork—*
*Moreland Hayne & Co., Ltd., London.
*Stonework—*
*Patent Impervious Stone Co., London.
*Sanitary Fittings—*
*Leeds Fireclay Co., Ltd., Leeds
*Flooring—*
*Jewson & Sons, Ltd., Hull.

**Manchester.**—Extensions to Messrs. J. Jones (Manchester), Ltd., Oldham-street. Messrs. J. W. Beaumont & Sons, architects, FF.R.I.B.A., 24, Brazennose-street:—

*G. Macfarlane & Sons, Ltd.

*Masons—*
*F. M. & H. Nuttall, Ltd.
*Plasterers and Painters—*
*C. E. Harwood, Ltd.
*Concretors—*
*Fram Reinforced Concrete Construction Co., Ltd.
*Plumbers—*
*T. Lightfoot & Co.
*Brickwork—*
*A. Hodkinson, Ltd.
*Steelwork—*
*Redpath Brown & Co., Ltd.
(All of Manchester.)

**Manchester.**—Showroom to garage, for Mr. J. A. Anderson, motor engineer, Wilmslow-road, Fallowfield. Messrs. Broughton, Atkinson & Eagle, architects, 37, Brown-street:—
*Moston Brick & Building Co., Ltd., Manchester.

**Manchester.**—10 shops and houses at the junction of Slade-lane and Crowcroft-road, Longsight, for Messrs. A. & E. Cohen & H. Doniger, of Imperial-buildings, Oxford-road. Mr. H. Davies, architect, 4, St. Mary's Parsonage:—
*Mosley Construction Co., Ltd., Cheetham.

**Manchester.**—Alterations to 76, 78 and 80, Oldham-street, for Mr. J. Dobbin:—
*Peace & Norquoy, Ltd., Manchester.

**Manchester.**—Bleaching and cloth warehouse at Collyhurst-road, Collyhurst, for Messrs. John Walton (Collyhurst), Ltd.:—
*T. Warrington, Hyde, Ches.

**Manchester.**—Shops and offices on Beech Mount and Rochdale-road, Harpurhey, as an extension to the new Maternity Home scheme for the North Manchester District Nurses' Home Trustees. Mr. J. E. Kewell, L.R.I.B.A., architect, 290, Oxford-road:—
*Moston Brick & Building Co., Ltd., Moston.

**Manchester.**—Store to works at Canal-street, Miles Platting, for the Manchester Oxide Co., Ltd.:—
*Wellerman Bros., Ltd., Hyde, Ches.

**Manchester.**—Reconstruction of King George Cinema, Gorton-lane and Preston-street, West Gorton, for Messrs. O. & G. Dewhirst. Messrs. E. Ogden & Co., architects, 1, Ridgefield, Deansgate:—
*F. Goodyear, Gorton.

**Maryborough.**—Erection of technical schools:—
*James Skehan ..... £2,915

**Meadowfield, Co. Durham.**—Chapel for the trustees of the Primitive Methodist Church. Mr. T. W. T. Richardson, F.R.I.B.A., architect, 57, High-street, Stockton-on-Tees:—
*W. Smith, Bearpark, Durham.

**Mexborough.**—40 houses in Chaucer-road, for the U.D.C. Mr. G. F. Carter, surveyor:—
*R. O. Weaver, Mexborough ..... £10,780

**Morris Cowley.**—Construction of a goods shed at Morris Cowley station, for the G.W. Rly.:—
*H. & C. Spackman, Hunt-street, Victoria-road, Swindon.

**Nelson.**—Improvements proposed at the "Borough Hotel," for Messrs. Duttons Blackburn Brewery Co., Ltd. Messrs. Hitchon & Pickup, architects, 46, Manchester-road, Burnley:—
*Simpson Bros., Burnley.

**Newcastle-on-Tyne.**—Alterations to the premises of Messrs. Bainbridge & Co. Mr. Walton Taylor, architect, St. John-street:—
*Hepple, Ltd., Newcastle-on-Tyne.

**Newcastle-on-Tyne.**—Reconstruction of the "Ford Arms" Hotel. Messrs. Cackett & Burns Dick, architects, Pilgrim-street:—
*W. & J. Lowry, Newcastle-on-Tyne.

**Newport (Isle of Wight).**—12 non-parlour type houses at the South-street housing site, for the T.C. Mr. E. A. Slater, Borough Surveyor:—
*T. E. W. Phillips, Priory-road, Carisbrooke, Isle of Wight ..... £3,780

**Northolt.**—New "Swan" public-house in Fetts-lane. Messrs. F. J. Fisher & Son, architects, 35, John-street, Bloomsbury, W.C.1. Mr. E. E. Richardson, 35, John-street, W.C.1, quantity surveyor:—

| | |
|---|---|
| T. Hiscock, Ltd., Hounslow | £7,557 |
| T. Higgs, Harrow | 7,391 |
| W. Dickens, Ealing, W.5 | 7,150 |
| A. & B. Hanson, Ltd., Southall | 6,898 |
| G. Bollom & Sons, Acton, W.3 | 6,877 |

**Oldham.**—Alterations in connection with the structural alterations at the mental wards of the Poor Law Institution, for the B.G. Mr. C. T. Taylor, of Messrs Roberts & Bowman, architects, 10, Clegg-street:—
*Brickwork—*
*J. & J. Blunn.
*Carpenters and Joiners—*
*Samuel Ashton, Ltd.
*Plumbing, Glazing and Painting—*
*J. Harrison.
*Plastering—*
*J. Glynn.
(All of Oldham.)

**Pinner.**—Two houses, on plots Nos. 73 and 76, West End Farm estate, Pinner, for the Home Guarantee Corporation, Ltd. Mr. Brian L. Sutcliffe, A.R.I.B.A., architect, 7, Duke-street, Wigmore-street, London, W.1:—
*A. V. Low ..... £2,342

**Plymouth.**—Alterations, etc., to premises, South Devon-chambers, for the G.W.R. Mr. P. E. Culverhouse, F.R.I.B.A., architect, Paddington Station, W.2:—
*H. T. Lapthorn, 20, William-street, Plymouth

**Portsmouth.**—Alterations and additions to the present windscreens round the bandstand on the South-parade Pier, for the Corporation. Mr. R. J. Jenkins, City Engineer:—
Tanner Bros., Southsea.
E. & A. Sprigings, Portsmouth.
Gosport Cabinet & Joinery Works, Gosport.
*Wilkes & Co., Albion-srteet, Portsmouth ..... £787 7

**Scarborough.**—Three houses off Columbus-ravine. Messrs. F. Mitchell & Sons, architects, 9, Upper Fountaine-street, Albion-street, Leeds:—
*Hugh Proctor & Son, Scarborough.

**Sheffield.**—Premises at the junction of Campo-lane and North Church-street, for the Sheffield District Incorporated Law Society. Messrs. Chapman & Jenkinson, L. & A.R.I.B.A., architects, 18, Norfolk-row:—
*W. & A. Forsdike, Ltd., Sheffield.

**Sheffield.**—New Synagogue in Wilson-road, for the Jewish Synagogue Committee. Messrs. Rawcliffe & Ogden, architects, 39, Norfolk-street:—

| | |
|---|---|
| Bovis (1928), Ltd. | £18,437 |
| J. Bertram & Co. | 16,510 |
| G. Longden & Sons, Ltd. | 16,498 |
| D. O'Neill & Son, Ltd. | 16,370 |
| B. Powell & Sons, Ltd. | 16,370 |
| W. & A. Forsdike | 16,275 |
| J. Middleton, Ltd. | 16,170 |
| T. Roper & Sons, Ltd. | 15,999 |
| J. Eshelby & Son, Ltd. | 15,845 |
| T. Wilkinson & Sons, Ltd. | 15,759 |
| H. Teamby | 15,639 |
| Reeves Charlesworth, Ltd. | 15,541 |
| Abbott & Banister, Ltd. | 15,482 |
| W. G. Robson | 15,358 |
| W. Marlow & Sons, Ltd. | 15,304 |
| A. Bradbury & Sons | 15,300 |
| *Henry Boot & Sons (Sheffield), Ltd. | 15,162 |

**Skegness.**—Police Court, for the Lindsey C.C. Mr. G. R. C. Harding, A.R.I.B.A., surveyor for police buildings, 29, Broadgate, Lincoln:—

| | |
|---|---|
| A. H. Aulsebrook, Skegness | £4,065 7 0 |
| Horace Teanby, Ltd., Sheffield | 3,331 13 9 |
| A. E. Thornhill, Lincoln | 3,163 9 0 |
| F. W. Atkinson & Son, Brigg | 3,160 0 0 |
| J. Crawshaw, Skegness | 3,150 0 0 |
| R. S. Robertson, Skegness | 2,910 11 4 |
| J. T. Turner & Sons, Wainfleet | 2,868 0 0 |
| Wm. Wright & Son, (Lincoln), Ltd., Lincoln | 2,847 0 0 |
| John F. Bush, Nottingham | 2,800 0 0 |
| Wallhead Bros., Ruskington | 2,790 0 0 |
| Burbidge & Porter, Skegness | 2,753 3 9 |
| West & Toyne, Skegness | 2,750 0 0 |
| W. Greetham, Son & Gamble, Skegness | 2,750 0 0 |
| John Dean, Skegness | 2,680 0 0 |
| *Bernard Pumfrey, Ltd., Gainsborough | 2,490 0 0 |

**Smethwick.**—58 non-parlour type houses on the Smethwick Hall estate, Auckland-road, for the C.B. Mr. Roland Fletcher, Borough Engineer and Surveyor:—

| | |
|---|---|
| Geo. Smith (B'ham), Ltd. | £23,287 |
| A. M. Griffiths, Wolverhampton | 22,620 |
| Eadie Towers & Co., Wolverhampton | 22,330 |
| T. Richards (Chasetown), Ltd., Walsall | 21,750 |
| R. S. White, Selly Oak | 21,576 |
| J. Harper & Sons, Blackheath | 21,170 |
| R. Whitehouse & Sons, Birmingham | 20,822 |
| Wm. Cooper, Blackheath | 20,720 |
| Geo. Stubbings, Birmingham | 20,010 |
| Housing, Ltd., Blackheath | 19,662 |

**Southsea.**—New shops and showrooms and the conversion of large house into shops and flats. Messrs. North, Robin & Wilsdon, FF.R.I.B.A., architects, Townsend House, Greycoat-place, S.W.1. Mr. Henry A. Mackmin, F.S.I., 10, Vigo-street, Regent-street, W.1, quantity surveyor:—

| | |
|---|---|
| J. H. Jordan, Ltd., Southampton | £13,573 |
| Theo Conway, Ltd., Weymouth | 13,247 |
| S. Salter, Southampton | 12,781 |
| J. Croad, Ltd., Southsea | 12,760 |
| Roy Corke, Ltd., Southampton | 12,280 |
| F. Privett & Co., Southampton | 12,267 |
| *F. Bevis, Ltd., Southampton | 11,859 |

*Stonework—*
*Plasm Co., East Molesey.

**Stirling.**—New police station at Spittal-street, for the T.C. Mr. Andrew H. Goudie, Burgh Engineer:—
*R. D. & J. Gardner, Stirling.
*Jas. Currie & Son, Stirling.
*G. G. Kirk, Ltd., Stirling.
*Limmer & Trinidad Lake Asphalt Co., Glasgow.
*Alex. Mills, Stirling.
*Robt. Frater, Stirling.
*Alex. Walls, Stirling.
*Taylor & Fraser, Ltd., Glasgow.
*Toffolo, Jackson & Co., Glasgow.
*Alex. Brewster, Stirling.
*W. & T. Marshall, Stirling.
*Ellery Bros., Stirling.
*Milne & Co., Stirling.
(All trades.)

**Southampton.**—Alterations at 113a, East-street:—

| | |
|---|---|
| Bevis, Ltd. | £3,050 |
| Blakey | 2,998 |
| Bovis | 2,947 |
| Roy Corke, Ltd. | 2,800 |
| Whittaker | 2,746 |
| *Brazier & Sons | 2,655 |

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**Strood.**—Boundary walls, for the Joint Burial Committee for the Strood Intra and Extra. Mr. E. F. Cobb, architect, 43, High-street, Rochester:—

| | |
|---|---|
| Jones & Sons, Cricklewood | £1,722 8 |
| Skinner & Son, Chatham | 1,087 0 |
| Norman West, Strood | 1,058 0 |
| Webb & Sons, Rochester | 903 10 |
| Gates & Sons, Strood | 899 0 |
| Leech, Rochester | 765 0 |
| *Durrant & Son, Rochester | 747 6 |

**Teddington.**—Making-up of Cambridge-crescent, for the U.D.C. Mr. E. Bostock, Surveyor. Quantities by the surveyor:—

| | |
|---|---|
| *John Mowlem & Co., Ltd., London | £2,330 3 11 |

**Thorne.**—For (*a*) 12 houses at Hatfield, and (*b*) 36 at Thorne, for the R.D.C. Mr. H. Plewes, surveyor and architect:—

| | |
|---|---|
| (*a*) *G. Porkis Exors., East-lane, Stainforth | £3,580 |
| (*b*) *W. Firth, Ltd., Carlton Works, Lockwood-road, Doncaster | 10,158 |

**Torquay.**—Additional story to the Addison Cafe. Messrs. North, Robin & Wilsdon, FF.R.I.B.A., architects, Townsend House, Greycoat-place, S.W.1:—

| | |
|---|---|
| *— Vanstone, Torquay | £3,495 |

**Trowbridge.**—Shops in Bradley-road. Mr. C. H. Goater, architect, Silver-street:—

*Culverhouse & Sons, Trowbridge.

**Tullamore.**—Nine houses at Barrack-street, for the U.D.C.:—

| | |
|---|---|
| Eugene Hetherington (per house in brickwork) | £330 |
| Eugene Hetherington (per house in concrete) | 340 |
| Eugene Hetherington (per house in masonry) | 375 |
| *Duffy Bros., Tullamore (brickwork) | £2,884 15 |
| *Duffy Bros., Tullamore (concrete) | 2,780 0 |

**Tweedmouth.**—Alterations and improvements to the East Council school, for the Northumberland E.C. Mr. C. Williams, Director of Education:—

| | |
|---|---|
| *J. H. Pierce, Mordington, Berwick-upon-Tweed | £1,947 14 5 |

**Wigan.**—Restoration of the central premises of the Wigan & District Equitable Co-operative Society, Ltd., Standishgate:—

*Wilson & Co., Wigan.

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